ABSTRACT OF

The Harveian Lectures

ON

THE TREATMENT OF SURGICAL TUBERCULOUS AFFECTIONS.

Delivered before the Harveian Society of London on Dec. 7th, 14th, and 21st, 1899,

BY W. WATSON CHEYNE, F.R.C.S. ENG., F.R.S.,

SURGEON TO KING'S COLLEGE HOSPITAL AND PROFESSOR OF SURGERY AT KING'S COLLEGE.

LECTURE III.[1]

Delivered on Dec. 21st.

GENITO-URINARY TUBERCULOSIS.

THE lecturer began by making some general remarks as to the mode in which tuberculosis affects the genito-urinary system, the directions in which it spreads, and the frequency with which the various organs are affected. Of the male genital organs the epididymis seems to be the one most frequently affected with tuberculosis, but the disease rarely remains localised there for any length of time, but spreads, on the one hand, into the testicle, and, on the other hand, along the vas to the vesiculæ seminales and the prostate. The bacilli may reach the epididymis either from the blood or from the peritoneum or possibly along lymphatic channels. Some also think that they may reach it by spreading from the urethra along the vas deferens, but that seems to be a very doubtful mode. In the epididymis it may begin either in the ducts or outside them. As regards the forms of disease in this region we may have a local acute tuberculosis, generally beginning in the testicle, or the more ordinary and chronic form, which usually commences in the epididymis. As regards the part of the epididymis first affected the globus major seems to be most frequently attacked in the first instance, though Bardenheuer asserts that it commences in the majority of cases in the globus minor owing to the stagnation of the secretion in the duct at the point where the vas leaves the epididymis and where it has a more or less abrupt bend and is tortuous. From the epididymis the tubercles spread into the testicle along the corpus highmori and may be seen scattered over the surface of the testicle in the form of isolated tubercles, most numerous as one approaches the hilum. It may also spread along the vas either in the interior or more frequently in the lymphatic vessels in the wall of the vas.

After discussing the well-known symptoms of tuberculous epididymitis the lecturer went on to the consideration of the treatment, which must be considered under two categories—namely, non-operative and operative. In a considerable number of cases of this disease the trouble becomes quiescent either without suppuration or after the occurrence of suppuration, and the thickening may after a time almost entirely disappear. It is not easy to say in any given case whether it is likely to become quiescent or not, more especially in the more chronic cases where the swelling has been found more or less accidentally and where it is firm. A large number of these cases improve under general treatment as regards the testicle itself, while others which for a time have progressed favourably ultimately break down and suppurate. In all cases, however, there is a great tendency for the disease to spread to the other parts of the genito-urinary system, or to the other side, even although the primary disease may be improving. In fact, in the great majority of cases when the patients come under notice the vesiculæ seminales, or at least the vesicula on the affected side, can generally be felt to be enlarged and nodular, and the disease tends to spread to the prostate and thence to the urinary system. Mr. Watson Cheyne continued:—

Non-operative treatment may be employed either when the case when first seen is very chronic with a strong tendency to recovery, or where other parts of the genito-urinary system are already seriously affected. It consists essentially in placing the patient under good hygienic conditions, in efficient support to the testicle, and in the avoidance of injury. As regards drugs, benefit may be obtained from cod-liver oil, guaiacol, iodoform, &c. In addition to support to the testicle, compression and the application of ointments of mercury or iodide of potassium are frequently employed, but the former is to my mind a very doubtful measure, and as regards the latter I cannot say that I have seen any beneficial effect. If there is much pain or tenderness belladonna ointment is sometimes of use. In cases where the disease is evidently advancing injections of various materials into the epididymis have been advocated, those most frequently employed being the iodoform emulsion, so much used in tuberculous cases, and chloride of zinc, or the principle introduced by Lannelongue in the treatment of joint disease; these methods, however, do not appear to do any good and the latter especially causes much pain. The operative treatment may be either partial or radical, the former consisting of scraping and epididymectomy and the latter of castration. Epididymectomy may, however, in some cases, especially when performed early, be classed as a radical and not a partial operation.

Some French surgeons more especially have advocated the employment of scraping or ignipuncture, and the former is useful in some cases where neither epididymectomy nor castration are advisable or permitted. Such are cases where there is suppuration or where abscesses or sinuses are present and where castration is not advisable or not acceded to by the patient. It has also been advocated at an early stage as a substitute for epididymectomy or castration, but I should not recommend it at that period. As I have already said in speaking of glands, one can only remove with a sharp spoon the soft breaking down tuberculous material—the tubercles situated in the firmer tissue beyond escape; and I can see no advantage in scraping out the epididymis at an early stage over the cleaner and more satisfactory operation of epididymectomy. If scraping is employed a free incision should be made so as to expose the parts completely, and then, starting from the point where the abscess has originated, the cheesy mass in the epididymis should be thoroughly cleared out and portions of the wall around should be clipped away. It is well afterwards to sponge the surface with undiluted carbolic acid and then to pack the wound with iodoform gauze or cyanide gauze sprinkled with iodoform till granulation has taken place.

As regards the operative treatment for use in ordinary cases two methods are at our disposal—namely, castration and epididymectomy. I need not say anything about the mode of performing castration, but as epididymectomy is not generally practised I may describe this operation and I shall describe the method employed by Bardenheuer, who was the first to advocate this operation.

The operator stands on the affected side, grasps the testicle, and turns it inwards so that the epididymis looks towards the operator. An incision should then be made over the testicle, and as I think that the vas deferens should always be removed as high as possible I should advise that the incision commence over the external abdominal ring and extend downwards to the lower edge of the testicle. If an abscess is present which has caused adhesion of the skin or if there be a sinus the incision must diverge on each side of the affected skin, so as to include those portions in the parts removed. The various tissues are then divided till the cord above and the testicle and epididymis below are exposed. The next step in the operation is to separate the epididymis from the testicle. These structures are only organically connected together by the globus major, the body being free, and the globus minor being simply attached by fibrous tissue. In separating them, therefore, one begins at the body and the globus minor. Without much trouble a blunt instrument can be very soon insinuated between the body of the testicle unless in advanced cases where marked adhesion has taken place between the two. The globus minor is then removed by detaching it from the tunica albuginea, and when the body and the globus minor have been thus detached one can raise them up and so ascertain the condition and relations of the globus major. At this stage care must be taken to avoid division of the vessels which enter and supply the testicle. These are present on the deeper surface of the epididymis as it lies in the position indicated—that is to say, they enter the testicle chiefly on the inner side of the

[1] Lectures I. and II. were published in THE LANCET of Dec. 16th and 23rd, 1899, respectively.

epididymis. On that side, therefore, the substance of the cord should be pushed off from the epididymis with the handle of the knife. On the other side the incision is made through the tunica albuginea close to the margin of the epididymis, and then the connexion between the globus major and the hilum is divided, and in this way the epididymis is separated from the testicle and remains attached to the vas. If it is found that the hilum at the point of detachment is not perfectly healthy one may cut into it and remove portions of the tissue, taking care as far as possible to keep to the outer side. Indeed, further slices of the testicle itself may be taken away if it is found that marked disease is present. The vas deferens is then freed from the other structures of the cord and followed up to the external ring, and it is pulled down through the external ring and divided as high up as possible. After tying the bleeding points the incision in the testicle is closed by two or three catgut sutures and the wound sewn up. It is not necessary to suture the tunica vaginalis. Usually, if the surface of the testicle and the tunica vaginalis are rinsed with sublimate solution no subsequent hydrocele occurs. It is very important to see that all bleeding points are stopped, otherwise the scrotum may become very much distended with blood and healing thus much delayed. If there be much oozing it is well to put in a drainage tube at the lower part for from 24 to 48 hours, so as to allow the blood to escape.

We may now discuss the relative advantages and disadvantages of these two operations and the cases for which they are severally suitable.

1. *Castration.*—If one regards the affected part alone this is certainly the most effectual operation, especially if combined with section of the vas as high up as possible, and were it not for the objections to be presently mentioned it is the operation which one would advocate in preference to any other. In some cases, indeed, it is necessary, while in others, in spite of the objection, it is advisable. It is necessary, for example, in cases of acute tuberculosis of the testicle and epididymis at an early period as the only possibility of checking the disease, and it is also necessary in cases where the pain is great and more especially where it is due to suppuration in the substance of the testicle. It is advisable in some of the advanced cases where there is much suppuration and where the patient's health is giving way as a consequence, even although disease may be also present in the vesiculæ seminales and the prostate.

On the other hand, castration in cases of tuberculous epididymitis is a very serious operation and one not lightly to be undertaken. If one could be sure that the removal of one testicle alone would arrest the disease, or at any rate that the possibility of the other becoming attacked was extremely slight, then undoubtedly castration would be the best procedure at an early stage of the disease; but unfortunately this is not the case. Even quite at an early period the trouble spreads along the cord and affects the vesiculæ seminales, or at least the vesicula on the affected side, and in many cases the epididymis on the other side becomes sooner or later attacked. The proportion of cases in which both sides are affected is variously given by different writers, but in my experience the majority of the cases are ultimately bilateral. The affection of the second epididymis may occur soon after that of the first or it may be delayed for a long time. In a case which I had under my care last summer an interval of seven years had elapsed from the time when I had removed the first testicle before the second became affected. It is this tendency to disease of the second testicle which renders the operation of castration such a very serious one and for the following reasons: in the first place, if one testicle has been already removed the patient becomes extremely discouraged when he finds that the disease reappears on the other side; he is very apt to blame the surgeon as if he were at fault and is by no means ready to submit to a further operation. Besides, as one cannot assure him in the first instance that the disease will not re-appear on the other side—indeed, as one ought to tell the patient of the possibility of the other side becoming diseased before performing castration—it is by no means easy to persuade him to have the operation done at an early period in the course of the disease, at the only time, indeed, when the operation gives a fair prospect of complete recovery.

There can be no doubt that the loss of both testicles exercises a very deleterious effect on the patient, more especially as the disease has previously produced great mental depression and anxiety. In young patients this effect is not so marked as in those who are getting up in years, but in them the result is often that they lose interest in their affairs, become less acute men of business, lazy, irritable, and morose, and in some cases may actually become demented or maniacal. Indeed, in these cases of double castration for tuberculous testicles a very considerable proportion of the patients have ultimately committed suicide. Some attribute this mental disturbance entirely to the psychical effect of the loss of the testicle and the fear of consequent sterility and surgeons have tried to deceive the patients by introducing artificial substitutes, such as balls of celluloid, silk, &c. Apart, however, from the fact that healing does not always occur over these materials and that they not infrequently have had to be removed subsequently, the fact that a patient could in this way be deceived would almost imply that his mental calibre had already been impaired. These attempts have not met with much success and have been now practically given up.

Apart, however, from the generative function of the testicles, it is now generally admitted that they have another and most important action, and that by means of their internal secretion they exert a very great influence on the well-being of the patient, and it is to the loss of this internal secretion that the bad effects of double castration are mainly due. There is ample evidence that where the vasa are blocked as the result of inflammation, or where they are removed and thus the generative functions are abolished, the testicles very seldom atrophy, nor are those serious effects to which we have referred produced.

A further question has been raised—namely, whether after the removal of both testicles the patients do not more readily succumb to the attacks of the tubercle bacillus as well as of other organisms than where they are present, and experiments which have been performed on dogs seem to support this view—dogs which have been previously repeatedly injected with testicular fluid resisting inoculation with tubercle bacilli, while others not so prepared have succumbed.

2. *Epididymectomy.*—These objections to castration are to a great extent met by the operation of epididymectomy. In the first place, one must bear in mind that the generative function of the testicle is at once destroyed by the disease and thus the patient is placed in no worse condition by the removal of the epididymis and vas, as regards that point, than if no operation were performed. At the same time, with epididymectomy the testicle is left and the internal secretion remains. Hence the great difficulty as regards early operation is removed and the patient is more likely to consent to this operation at an early period when it may be of benefit in arresting the disease than if castration were proposed, and even if the disease does appear on the other side subsequently a similar operation is more readily acceded to. Besides, if one is only going to remove the epididymis one need not delay the operation because some cases get well without operation, for what you propose to do does not place the patient in a worse condition than be at present is, while, on the other hand, it may, when performed sufficiently early, be the means of arresting the spread of the disease.

As regards the results of epididymectomy the majority of cases heal without any trouble. In some cases, more especially where the disease is advanced, a fistula is left, and if this is the case one may after a time scrape out the fistula and treat it in the ordinary manner before described, and not infrequently on scraping out such a fistula one finds only a small cheesy patch, after the evacuation of which the wound heals. As regards function, it is found that after the removal of the epididymis the patient, who has generally been in a depressed state before, recovers his tone, while the sexual functions which were previously in abeyance return and may even be increased. Epididymectomy is of use even where the vesiculæ are affected, for the disease in the vesiculæ and even in the prostate frequently comes to a standstill. I have, indeed, seen the same after unilateral castration, so that disease of the vesiculæ seminales is not really an absolute contra-indication to operation. It is probable that when the flow along the duct carrying bacilli with it and the lymph flow are arrested as the result of the operation a considerable stimulus to the extension of the disease in the vesiculæ and in the prostate is removed, and, further, we must bear in mind the influence which the removal of the vasa in other cases seems to exercise on the prostate.

Various objections may be urged against the operation of

epididymectomy, of which the following are the chief. 1. The operation is often only partial because tubercles and tubercle bacilli may be present in the testicle itself; this is no doubt true in many cases unless the operation be performed at quite an early period, but I have already pointed out that partial operations are sometimes very effective, especially where the tubercles left behind are isolated and not in masses. Besides, the operation cuts off the communication between the testicle and the rest of the genito-urinary system, and even if recurrence takes place in the testicle it can be treated locally by scraping out sinuses and so forth. 2. It has been pointed out that one may find on cutting down that the testicle is badly diseased and that castration is necessary after all. Granted that this may be the case, the condition is no worse than if we cut down with the intention of performing castration in the first instance, and we have, on the other hand, the satisfaction of knowing that we are not needlessly sacrificing an important organ. 3. It is urged that the vascular supply to the testicle may be interfered with and that the organ may subsequently necrose; this has certainly happened in some cases either where sufficient care is not taken to avoid injury to the vessels entering the testicle or where the disease of the testicle itself has been so extensive that it has been necessary to take away the greater part of that organ. In the latter case it is, of course, doubtful whether castration was not the proper procedure in the first instance. 4. Bardenheuer himself thinks that recurrence on the other side is more frequent after epididymectomy than after castration, and he further states that the secondary disease may be more acute than the primary. That, however, does not seem to be the general experience; besides, if it were so and castration were necessary on the other side the patient would still be left with one testicle, whereas in double castration both are taken away.

From these various considerations it seems to me that the operation of epididymectomy is well worthy of more consideration than it has yet received in this country, but, like other procedures, it must be employed with judgment and is by no means applicable to every case. It is distinctly contra-indicated where the whole of the body of the testicle is diseased; where there is a deposit in the centre of the testicle; where there are advanced lesions of the vesiculæ and prostate, especially with suppuration; where the urinary system is invaded; and where the patient is suffering from advanced phthisis. In these two latter cases castration or scraping are the better operative procedures if operation is necessary at all.

Tuberculosis of the prostate.—The prostate gland is one of the most frequent seats of tuberculosis, and it is probably the organ most frequently affected in the combined genito-urinary disease, for not only may the disease occur primarily in it but it may also be secondary both to disease of the epididymis and to disease of the urinary system.

After discussing the general characters of prostatic disease the lecturer went on to point out that the treatment resolves itself into palliative and operative treatment.

The palliative treatment consists in rest, good hygiene, the avoidance of sexual excitement, the employment of antiseptic injections per urethram, the administration of antiseptics by the mouth which pass out with the urine, the use of morphia and belladonna suppositories, and so forth. So long as there are no signs of breaking down and no marked increase in the prostatic trouble the case should be watched without operation. In France some surgeons recommend that if the disease is progressive injections of iodoform in glycerine or ether or injections of chloride of zinc should be employed, and various operations have been elaborated with the view of carrying out these injections. In employing chloride of zinc, for instance, some surgeons open the urethra in the membranous part and then push a needle attached to a syringe containing chloride of zinc into the substance of the prostate. Others, again, introduce a needle through the rectum, but this is very apt to be followed by sepsis. Some have even done a suprapubic cystotomy.

This injection method is, however, a most uncertain and unsatisfactory one and it cannot be at all recommended. Certainly it is not so satisfactory as to lead one to perform any of the operations above-mentioned with the view of carrying it out. Practically, surgical intervention limits itself to cases where suppuration is occurring, and in these instances it should be carried out early with the view of evacuating the pus before the abscess opens into the urethra or into the rectum. For this purpose the best way for reaching the prostate is probably by means of a transverse or curved incision with the convexity forwards just in front of the anus. This is deepened, the urethra pushed forward, its situation being indicated by a sound, and the rectum pushed backwards; and as it is deepened the levator ani is divided. Usually where an abscess of any size is present one finds after getting through the levator ani that the finger passes into a large cavity containing the pus, and thence one can follow the cavity into the prostate. Having opened the abscess it should be scraped out, care being taken of course not to scrape through the wall of the urethra or of the bladder, and having evacuated it as thoroughly as possible the cavity should be packed with iodoform gauze. This operation should be done even in cases where pus is escaping into the urethra, because without it the patient is almost certain not to get well. Where, however, the abscess has already burst into the rectum it is well to avoid an operation of this kind, for the result would be very apt to be a rectal fistula. In these latter cases it is better to dilate the anus and attempt to enlarge the opening into the rectum and scrape out the cheesy deposit through that opening, and in those cases the wound may heal. In the after-treatment a catheter should be tied in for a week or 10 days, and if there has already been a communication between the urethra and the abscess cavity the patient should be taught to pass a soft catheter for himself until the wound has healed. Healing usually occurs fairly satisfactorily in these cases where all the cheesy material has been removed. A sinus may, however, remain for a long time, or it may be necessary to open up the wound again, but in most cases the result is fairly satisfactory.

Tuberculosis of the bladder.—This is not at all uncommon, although much less frequent than tuberculosis of the kidney. The disease may be primary, although that is rare. It is usually secondary to disease of the kidney, or it may be secondary to tuberculosis in the genital system. It may occur at any age, most usually in young adults, and in males more frequently than in females. The tubercles are generally deposited in the superficial layers of the mucous membrane and consequently ulceration takes place pretty soon, ulcers forming in size from a pin's head to a sixpenny-piece or even larger. The disease usually begins towards the apex of the trigone, and the ulcers may be numerous and in bad cases they may extend over the whole of the bladder. The wall of the bladder itself becomes the seat of chronic inflammation and is usually much thickened, whilst it is also greatly reduced in size and can only contain a very small quantity of urine.

After discussing the symptoms and diagnosis it was pointed out that the treatment may be either medical or surgical. Unfortunately, by neither method can we with any certainty bring about a cure, but nevertheless much may be done to relieve the patient's distress. Medically, good hygiene, country or seaside air, &c., are of the first importance, and light exercise is also advisable. In acute cases relief may be obtained by warm saline baths, mustard to the hypogastric region, warm water injections into the rectum, &c. The food should be light and easily digestible and consist essentially of large quantities of milk. Cod-liver oil should be given in large doses, and benefit may also be obtained from the use of arsenic, creasote, opium and belladonna for the pain, &c. These means are, however, often ineffectual and local measures are frequently adopted, more especially washing out the bladder so as to get rid of the pus and mucus and injecting various substances either to relieve the pain, such as weak cocaine, opium, or antiseptic substances, with the view of trying to interfere with the growth of the bacteria. Warm boric lotion, from 3 to 4 per cent., is one of the most suitable fluids for washing out the bladder. Iodoform and glycerine is often injected into the bladder and left in, but the results are disappointing. Iodoform and vaseline, about six drachms of a 5 per cent. mixture, has been strongly advocated by some French surgeons. Injections of nitrate of silver, which are of use in other forms of cystitis, almost always do harm. The instillation of weak sublimate solution (from 1 in 1000 to 1 in 5000) has also been employed and is much praised by some. Cocaine and opium injected into the bladder are very transient in their effects and must be very carefully used as they are apt to be absorbed. Benzoic acid taken internally helps to keep the urine sweet. Pills of iodoform in from half-grain to one-grain doses, tincture of buchu, triticum repens, &c., may be employed. Attempts have also been made to increase the

capacity of the bladder by gradual distension with fluid, and his subject has been referred to by Mr. W. H. Battle only as recently as in THE LANCET of Dec. 9th.

Coming now to the more strictly surgical treatment it must be admitted that it is by no means always efficacious; nevertheless, in many cases marked relief is afforded to the patient, while in some the disease apparently subsides. This is more especially the case where the tuberculosis of the bladder is primary. Even where a cure is not obtained the relief afforded to the great sufferings of the patient amply compensates him for the operation.

The operative interferences consist in opening the bladder and draining it, in attempting to remove the tuberculous ulcerations, or in applying antiseptic substances to them. My own opinion is that the essential benefit which follows operative treatment is the result of the drainage of the bladder which is thus placed at rest. In two cases in which I did nothing else marked improvement resulted—quite as marked as in cases where attempts have been made to get rid of the ulceration or to destroy the bacilli. Nevertheless, I think that although the essential point is rest to the bladder it is well, if one can, to try to improve the ulcerated condition. In some cases where the ulcers are quite small the piece of mucous membrane and the ulcer may be pinched up and snipped off, any bleeding being stopped by the electric cautery. In other cases where the ulcer is larger an attempt may be made to scrape away the surface by a sharp spoon; this of course is difficult, seeing that there is no firm background against which to scrape. A background may be provided by a bag in the rectum, or in some cases where the ulcer is low down by the finger in the rectum; but in any case scraping the ulcer cannot be very satisfactory. After scraping it as well as one can it is well to touch the surface of the ulcer with the point of an electric cautery. Having scraped and cauterised the ulcers, some iodoform should be rubbed into the surface and then the bladder should be left open and drained. This is best done by introducing an indiarubber tube into the bladder above the pubes and carrying the other end into a basin of antiseptic solution. Care should be taken that the tube does not go too far into the bladder; if it touches the posterior wall of the trigone it is apt to give rise to great spasm and thus make the patient worse instead of better. In most cases it suffices to have the end of the drainage-tube simply projecting into the bladder, and to prevent its shifting its place it is well to take a stitch through the tube, the wall of the bladder, and the skin, which can be afterwards removed when one wishes to remove the tube. The skin should be stitched up around the tube so as if possible not to permit any leakage, and the tube should be large enough to thoroughly fit the hole which has been made into the bladder. The wall of the bladder above the ureters may project forwards and touch the anterior wall at the lower part so as to leave a cavity in which urine collects and which the patient passes per urethram. Under such circumstances of course the rest to the bladder is insufficient. This may be avoided to some extent by raising the foot of the bed very considerably, so as to take the weight of the intestines off the upper part of the bladder, and by introducing a longer tube. The tube should be left in for from four to five days and then should be taken out, washed, and re-introduced. It is well to wash out the bladder twice a day through the tube with weak boric lotion at the temperature of the body, and some introduce from time to time a little iodoform and glycerine emulsion; the latter is, however, not of any great consequence. The drainage of the bladder should, in my opinion, be kept up till, as far as one can judge, the cystitis has completely subsided; I believe that it should be continued for at least six weeks and I have continued it for as long as six months in one case. Some French surgeons close the bladder at once without drainage, being content with excising and cauterising the ulcers. This I have never attempted and I very much doubt if it is likely to be so satisfactory as thorough drainage of the bladder and complete rest to the organ.

Along with local treatment the general health should be attended to. Large quantities of milk should be given and also cod-liver oil; good hygienic conditions, and the other palliatives and measures already alluded to in speaking of the medical treatment should be observed.

As to the results of treatment my own experience in five cases has been complete cure in one case and relief in the other four. In one about six months after the first operation the left kidney was found to be enlarged and tuberculous and was removed, the result being marked improvement of the patient and almost complete cessation of symptoms for two or three years. At the end of that time, however, the patient returned with increased symptoms again. In the other cases the patients left my care very much relieved, but still with some pus in the urine and with a certain amount of frequency and slight pain. More extensive statistics seem to show that about 80 per cent. of the cases are much relieved by the operation and about 20 per cent. are completely cured.

Tuberculosis of the kidney.—This is one of the most common seats of tuberculosis in genito-urinary disease and may be affected primarily or secondarily. The disease is not uncommonly unilateral at the early stage, but at a later period the second kidney tends to become attacked or even without being tuberculous may be the seat of a pyelo-nephritis or waxy degeneration. After discussing the pathology and symptoms of tuberculous kidneys the lecturer went on to consider the surgical treatment. The procedures adopted are (1) incision into the kidney, or nephrotomy, followed by drainage through a lumbar incision; (2) nephrotomy accompanied by scraping away as much as possible of the tuberculous material; (3) nephrectomy accompanied by the removal of a portion or the whole of the ureter; and (4) partial nephrectomy in which only the diseased portions of the kidney are taken away. Before proceeding to surgical measures one must ascertain (1) whether the disease is situated in the kidney; (2) which kidney is affected; (3) whether the kidney is the only one of the genito-urinary organs which is diseased; (4) to what extent the disease in the kidney has gone; and (5) whether the disease is unilateral or not.

Nephrotomy.—As regards nephrotomy, that can only be regarded as a temporary expedient. In a certain number of cases no doubt the kidneys do shrink up and the disease becomes quiescent and the fistula may ultimately heal; but in the majority of cases the disease goes on and one cannot even prevent pus escaping down to the bladder. The result of the operation, however, is frequently marked improvement in the general condition of the patient, enabling him at a subsequent period to undergo nephrectomy with a much better chance than if it had been done in the first instance. The indications for nephrectomy are where the patient is so bad as not to permit of any more prolonged operation and where, on the other hand, the sufferings of the patient necessitate intervention. It is also necessary where there are peri-nephritic abscesses and also where it is not certain that the other kidney is healthy. In most cases, however, it must be looked on as a preliminary operation with the view of getting rid of the fever and generally bad condition of the patient, and after a time the question of nephrectomy as a curative procedure must be considered.

Nephrectomy.—In order to justify nephrectomy one must be sure that the other kidney is intact and also that the bladder is free from disease. These are points which it is by no means always easy to be certain of. The condition of the bladder may no doubt be made out by cystoscopic examination, and the condition of the other kidney might also be ascertained at the same time if there was much pus coming from it. But very often the urine discharged from the second kidney, although it is diseased, does not contain enough pus to enable one to make a certain diagnosis by a cystoscopic examination. In the female no doubt one can pretty easily catheterise the ureters and so examine the urine from each kidney separately, and before performing nephrectomy it would be well to do this. In the male the procedure is so difficult that I doubt if even in the most expert hands complete reliance can be placed on the result. Other ways in which the condition of the other kidney may be ascertained have been adopted. For example, some surgeons advocate that before performing nephrectomy an incision should be made into the abdomen in the middle line in front and both kidneys examined by palpation. This is, however, a very uncertain method. No doubt, if one finds that a kidney is nodular and knobby, with all the other symptoms of tuberculous kidney, one may safely say that it is tuberculous, but it does not always follow that because a kidney is smooth and of normal size that it is not tuberculous. Again, where one finds that a kidney is distinctly enlarged one is apt to look on that, along with the other signs of tuberculosis, as an indication that that is the affected kidney; but it has happened more than once that the kidney on the suspected side has been found to be small or normal in

size while that on the other side was markedly enlarged, and subsequent examination has shown that the small one was the tuberculous one, while the large one was simply a healthy one undergoing compensatory hypertrophy. Hence palpation through the abdomen is in reality of very little use and only adds to the complications and risks of the operation. More important than palpation through the abdomen is the proposal to cut down on each kidney; in the first place, to cut down on the kidney which is supposed to be diseased and to ascertain without opening the kidney whether the conditions are such as to render nephrectomy advisable; if this is the case to temporarily stitch up the wound, turn the patient over on the other side and expose the other kidney, which should then be turned out, and, if necessary, incised, with the view of making sure as to its healthy condition. The objections to this procedure are that it, of course, means extra shock which cannot always be borne by a patient with tuberculosis of the kidney, and further, even with incision into the kidney, one cannot be quite certain that there may not be early tuberculosis at some part. Nevertheless, this procedure is the one which it is probably best to adopt if by no other method of examination one can come to any definite conclusion as to the healthy condition of the second kidney. In some cases, however, the matter must be left to chance, and where the patient is suffering very severely and one kidney is hopelessly disorganised one must allow him to take his chance as regards the condition of the other kidney, for if the one kidney is hopelessly destroyed one must assume that he has been living with the other kidney and that unless there is any reflex suppression of urine as the result of the operation he can still go on living with the other kidney after removal of the first, and with a better chance of recovery when the debilitating disease on the one side has been removed.

The chief indications for nephrectomy are the unilateral character of the lesion, the absence of lesions in other organs, definite symptoms of tuberculosis and sometimes the occurrence of severe hæmaturia. The contra-indications are where the general state of the patient is very grave, where there is tuberculosis of the second kidney or where there is tuberculosis elsewhere. There is no doubt that of all the procedures adopted for tuberculous kidney nephrectomy gives the best results. At the same time one may occasionally have a disastrous result where there is disease on the other side. Nephrectomy, also, may be performed either as a primary operation or secondarily to nephrotomy. The operation is no doubt most simple and most likely to be beneficial where it is a primary operation, but in some cases, as has been before remarked, the condition of the patient is so bad in the first instance that nephrotomy is all that can be done, and then, when the patient's condition has improved, the question of nephrectomy has to be considered. In these cases where the kidney is removed secondarily one generally finds that the adhesions have very much increased in number, so much so that the operation is prolonged, accompanied with considerable loss of blood and much shock, and there is also a risk of damaging the vessels which have been displaced by the contraction of the fibrous tissue. In some cases, indeed, the best plan is to remove the kidney piecemeal rather than to attempt to take it out as a whole, but where it can be removed as a whole it should be done. Under such circumstances the capsule is separated till the hilum is reached; a pair of forceps is then applied over the hilum and the kidney broken up and removed in pieces; finally, the hilum is examined carefully and the vessels are tied.

In all cases where the kidney is removed one must remove more or less and, if necessary, the whole of the ureter, and this can be readily done by an incision running downwards in the line of the operation for tying the common iliac. Where there is no perirenal abscess and not much adhesion of the kidney around, the oblique lumbar incision is perhaps the best, but in advanced cases, especially after a previous nephrotomy, I prefer Terrier's method.

Of late good results have been obtained in some cases by a partial nephrectomy, especially in the early stage, the diseased portions of the kidney being removed and the rest left behind. Several cases of this kind are chronicled in Mr. Henry Morris's lectures on Diseases of the Kidneys. The portions involved in the disease are scraped and clipped away and the remainder of the kidney is tightly stitched up. In a considerable number of cases, however, the removal of the rest of the kidney has subsequently been necessary. This partial operation may also be combined with a nephrotomy in cases where on cutting down on the kidney nephrotomy is found to be the desirable operation. Any bosses on the surface should be cut into and all the material scraped out, and if the kidney is fairly loose and can be taken out of the wound one can pretty thoroughly clear out the tuberculous material. These cavities should then be packed, a drainage-tube introduced into the pelvis, and the wound closed. Some, indeed, stitch up the kidney after such operations without any drainage, but the other is probably the better procedure. As a matter of fact, owing to the uncertainty as to the exact state of matters, when one cuts down on a tuberculous kidney one must do so with an open mind, prepared to do one of the various operations which have been referred to—either to remove the whole kidney, to remove portions of it, or to be content with a nephrotomy combined or not with scraping. But, on the whole, where the other kidney is healthy the best results are obtained by nephrectomy.

An Inaugural Address
ON
OUR POSITION AND OUTLOOK.

Delivered at Queen's College, Belfast, on Nov. 20th, 1899,

BY JAMES ALEXANDER LINDSAY, M.A., M.D. R.U.I., M.R.C.P. LOND.,

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE AT QUEEN'S COLLEGE, BELFAST; PHYSICIAN TO THE ROYAL VICTORIA HOSPITAL, BELFAST; AND CONSULTING PHYSICIAN TO THE ULSTER HOSPITAL, BELFAST.

GENTLEMEN,—Upon an occasion like the present we must not forget the dead. We meet to-day under sense of a loss which has cast its shadow not only over this College and Medical School, but also over this city and province, and, indeed, over a much wider area. The late Dr. Cuming was a man of rare natural gifts, of still rarer attainments, esteemed for his sagacity and honoured for his integrity, trusted as a physician, and beloved as a man. My acquaintance with him extended over a period of 20 years, first as pupil, then as colleague in hospital work, and for the last eight or nine years as companion and friend. I learned to appreciate his singular force and vigour of mind, which delighted to range over the whole field of knowledge, and to which no department of culture was foreign or uncongenial. It was difficult to decide whether his aptitude for science or his love for literature was more pronounced, or whether his strength was more manifest in philosophical discussion or in dealing with the practical affairs of life. It might be said of him, as it was said of Linacre, the first President of the Royal College of Physicians of London and the founder of British medicine: "It has been questioned whether he was a better Latinist or Grecian, a better grammarian or physician, a better scholar or man." Dr. Cuming carried on with singular success the traditional association of letters and medicine and belonged to the same intellectual family as Harvey and Sydenham, Paget and Stokes. His mind was essentially Socratic and critical rather than positive or dogmatic. He delighted to let the searchlight of his powerful intellect play round the mysteries of nature, life, and disease, sometimes with the effect of real illumination, but sometimes also—as he would himself have been the first to confess—only to render darkness visible. Regarding many great questions his last word was suspense of judgment. He always distinguished sharply between what was certain and what was only hypothetical or conjectural and could never be induced to go a single step beyond the evidence. Like Goethe, when confronted by any positive statement he would say: "But is it so? Is it so to *me?*" He was remarkably free from bias or prejudice and eminently wise in counsel, and probably it is by this last characteristic that he will be longest remembered. There

were other phases of his many-sided character which can only be briefly touched upon here—his admirable serenity of temper, his complete freedom from the foibles and jealousies which professional life sometimes induces, his playfulness and *bonhomie*, his steadiness in friendship, his loyalty as a colleague. He is truly mourned both within the ranks of the medical profession and by the larger world outside and he has left a name which, I venture to think, will not be soon forgotten.

Scientific addresses have of late been largely reminiscent in character. As the nineteenth century draws to its close it is natural that we should mark time, count our gains and our losses, seek to determine our present position, and cast a glance at the road already traversed and at the path which opens in front. Has medicine—one of the oldest of the arts and one of the youngest of the sciences—made solid progress during the century, progress commensurate with the notable developments in physical science, in industrial development, and in imperial expansion which have rendered this epoch illustrious? Has our profession grown in scientific precision, in practical utility, in efficiency, and in repute? Has it developed new organs to discharge new functions and sloughed off the organs which were decayed or outworn? To all these questions an answer can be given, perhaps not wholly satisfactory, but still full of encouragement. To appreciate the progress of medical science during the century we have only to place ourselves in the position of a practitioner a hundred years ago. We will conceive a professor of medicine addressing his class in the month of November of the year 1799. He would probably congratulate his hearers on the great progress of his art since the days of Harvey and Sydenham. He would refer sympathetically to the life and work of John Hunter, not many years deceased, and to the light thrown upon surgery and pathology by his powerful and penetrating intellect. He would recount the rise and progress of the great Edinburgh School of Medicine, then in its nascent glory, and tell of Cullen, of the Monros and the Gregorys. He would probably refer with becoming reserve and caution to the startling assertion of a country practitioner down in Gloucestershire, one Edward Jenner by name, that he had discovered a cure for the greatest scourge of the age—small-pox. But if we consider for a moment the many things which our professor could not know, our feeling will be one of commiseration for him, for his students, and for his patients. He knew nothing of chloroform or ether. He had never heard of antiseptic surgery. He was ignorant of the distinction between typhus and typhoid fever, or between scarlatina and diphtheria. He could not recognise the most ordinary diseases of the kidneys. He had no stethoscope, had never heard of auscultation, and his knowledge of diseases of the chest was less than that which the student now acquires in his first month at hospital. He had no ophthalmoscope, or laryngoscope, or clinical thermometer. He knew of the virtues of opium and quinine, of iron and mercury, but he had never heard of digitalis, or of salicin or of cocaine. He knew almost nothing of the physiology of the nervous system and had never heard of reflex action or of cortical centres. He had never counted the corpuscles in his own blood or seen a radiogram of his own vertebral column. He probably regarded ovariotomy as criminal. He had never seen a lithotrite. If we reflect upon the various points here enumerated—and the list might be easily expanded—we shall realise how largely modern medicine is a creation of the present century, and how our professor would have been either confounded with surprise or consumed with envy if he could have beheld our own enlarged resources and ampler day. That increased knowledge has led to increased power to cope with disease might easily be shown in detail by pointing to the practical extinction of small-pox and typhus fever, to our success in keeping cholera at bay, to the great reduction in the mortality following major operations in puerperal conditions and phthisis, and finally to the fact that during the present reign alone the average duration of human life in the United Kingdom has increased by three and a half years. It has sometimes been said that these great advances are due not to the soldiers but to the camp-followers of the great army of medicine, less to the physicians and pathologists than to the man who repairs our cisterns or looks after our drains. Let us give all such indispensable workers their due, but let us assert once for all that sanitation owes everything to scientific medicine and that in order to prevent disease you must know the laws of disease, its modes of origin and methods of propagation, and that such knowledge can come only from those who make disease their life study.

We conclude, then, that during the now waning nineteenth century our art has shared to a notable degree in the intellectual activity and practical progress of the time. Let us now see if we can define its present position, its relation to the age, its predominant tendencies, and its prevailing doctrines. Has medicine any peculiar advantages to gain or difficulties to surmount in adapting itself to the needs of a democratic epoch? We may rely upon it that a democratic age will take care that the benefits of medical science—so far as they commend themselves to the intelligence of the democracy—shall be widely diffused and embrace all classes. We may therefore look confidently for developments of the Poor-law system, for a higher level of municipal hygiene, and for many developments in the field of preventive medicine. But there is another and less agreeable side to the picture. Medical science can be helped very little by legislation, but it can be hampered and hindered much by legislators, and legislators cannot be wholly deaf to the voice of the man in the street, who is perchance a voter, and the man in the street finds that medical science often speaks to him in an unknown tongue, and he misunderstands, and therefore dislikes, her teaching and her methods. "Wir sind gewohnt," says Goethe, "dass die Menschen verhöhnen was sie nicht verstehen." A good instance of the difficulties which beset medical science in a democratic age is afforded by the proceedings of the late Royal Commission on Vaccination. Both in its inception and in the legislation which arose from its report there was a thinly-disguised concession to popular clamour. The spectacle of a Royal Commission comprising some of the most illustrious men of the day sitting for several years solemnly to re-try Edward Jenner's discovery is one calculated to give us pause. If we could count confidently upon the years of the patriarchs it might be interesting to have Royal Commissions to inquire whether the rotundity of the earth is in very truth a secure doctrine, or whether Newton's views on gravitation are really standing the test of time. But life is short. We cannot be for ever re-testing first principles. Progress is possible only by entering into the enjoyment of the labours of those who have preceded us and making the successful hypothesis of one generation the accepted axioms of the next. During the recent agitation much emphasis was laid upon the terrible consequences alleged sometimes to follow vaccination. Herein did history once again repeat itself. Those familiar with the early controversies about vaccination could find parallels for the most harrowing of these modern tales of horror. We read that in Edward Jenner's time some controversialists with lively imaginations detected resemblances to ox-faces produced in children (such was the theory) by vaccination. "A lady complained that since her daughter was vaccinated she coughed like a cow and had grown hairy all over her body, and in one country district it was stated that vaccination had been discontinued there because those who had been inoculated in that manner bellowed like bulls." The remedy for these difficulties of medical science in a democratic age is to spread the light, to trust to the slow but sure advance of wider knowledge and more enlightened views.

Science advances mainly by bringing isolated facts within the sweep of some wide generalisation; in other words, by emulating principles and formulating laws. Medical science seeks to discover whether any common cause, or set up causes, can be assigned to the manifold phenomena of disease. It must be confessed that the premature generalisations, based upon insufficient knowledge of unscientific ages in the past, have not advanced but rather retarded progress—witness the old humoral pathology derived from Galen and dominant for many centuries. It seems not unreasonable to hope, however, that a better fate may be in store for those leading ideas which are now permeating the theory and practice of our art. Of these ideas I may particularise two—viz., firstly, that disease is to a large extent due to some toxic substance present in the body either derived from without or generated in the body itself, and, secondly, that this toxic substance is in many cases the product of micro-organisms. Those who think that these doctrines do not rest upon any secure basis and will be merely one of the passing fashions of medicine have not sufficiently grasped the significance of the life-work of Pasteur. His researches upon fermentation in the early sixties of the century, followed by his work in connexion with anthrax, septicæmia, and hydrophobia, constitute a memorable epoch in human history and

have literally transformed the face of medical science. I need not stay to remind you how the work of Pasteur has been supplemented by that of Koch and a host of other workers, or with what brilliant results the Pasteurian doctrines have been applied by Lister to the practical problems of hygiene and surgery. We may take it as demonstrated that micro-organisms are the cause, or at least an essential part of the cause, of anthrax, malaria, tubercle, Asiatic cholera, relapsing fever, glanders, septicæmia, erysipelas, and probably of diphtheria and pneumonia. We may further take it as certain that micro-organisms cause disease almost entirely by virtue of certain toxic substances which they produce. These substances are of complex composition. "Some," says Fraser, "are alkaloids, and others modified proteids, and others again have altogether unknown chemical composition. Many of them are of extreme and almost indefinitely great activity; one milligramme, for instance, of the dry poisonous constituents of tetanus toxin is sufficient to kill a horse, or 600,000,000 times its weight of living tissue." But a still greater discovery, and one opening up a new field for therapeutics, was soon to follow. It gradually became evident that micro-organisms generated not only a lethal but a protective substance, not only a toxin but an antitoxin, not only a poison but actually an antidote to that poison. It was shown that the poison produced by certain micro-organisms could by process of attenuation or cultivation be deprived of its lethal, while preserving its protective, properties, and to the successful application of this principle we owe the modern treatment of hydrophobia and diphtheria and the prospect of a rational therapy for cholera and plague. How far this principle will be found capable of general application in infective diseases and whether pathologists will be successful in discovering the necessary modes of attenuation and cultivation the future will show. The outlook is certainly most hopeful. Medical science has secured a new *organon*, a new method, and one of apparently vast and far-reaching potentialities.

So much may be allowed, but the whole doctrine of the microbian origin of disease is still involved in great obscurity. We seem to have been admitted for a moment into the *arcana* of nature, to have got a glimpse of her mysterious methods of destruction and repair, of morbid action and healthy reaction, only to realise how much skill still remains inscrutable. How is it that one individual falls a prey to the micro-organism of malaria or tubercle while another individual escapes? Why does the bacillus of diphtheria rest harmlessly upon the fauces of one person and produce a fatal disease in the case of another? Why is the same micro-organism in one case entirely inert, in another moderately active, in a third positively lethal? Is it a question of hereditary constitution or acquired immunity, or of the nature of the media in which the organism grows? May not the soil be as important as the seed, individual proclivity as influential as the presence of the morbid germ? I by no means assert that these questions are insoluble—indeed, an answer to some of them seems already within sight—but such considerations serve to show the extreme complexity of the phenomena with which we are confronted. We may recall that Pasteur himself denied that micro-organisms were morbid entities and held that their activity was dependent upon the media in which they live and multiply.

The germ theory of disease has not been a mere brilliant and barren hypothesis. On the contrary, it has been the most fruitful speculation ever cast into the field of medical science. It has already revolutionised surgery. It has given us a remedy for diphtheria and hydrophobia and has opened up a prospect—distant probably, but hardly doubtful—of the ultimate extinction of all forms of infective disease. It is desirable, however, that we should hold it in a broad and philosophical, not in a narrow and technical, sense; that we should realise how much still remains to be explained, and how important it is that all the elements in the problem should receive adequate recognition.

Another leading doctrine of present-day medicine which has proved to be capable of important practical applications is the doctrine of internal secretion. It has been shown that the thyroid gland, the suprarenal capsules, and the pancreas possess internal secretions, the suppression or morbid alteration of which is the cause of certain well-known and important diseases, such as myxœdema, Addison's disease, and (possibly) diabetes. It has also been shown that in certain cases the deficiency in the natural secretion can be artificially supplied with the happiest results to the sufferer. There are few more encouraging chapters in the history of medical science than that relating to the recognition of the clinical features and pathology of myxœdema and the discovery of a rational and abundantly successful treatment. The disease was first described in outline, as a clinical picture, by Gull, who was, however, ignorant of the pathology. A little later Ord completed the description of the symptoms of the disease on which he conferred the name "myxœdema," and suggested that it was due to disease of the thyroid gland, an organ which had hitherto been regarded as of no importance in the human economy, some authorities even suggesting that it was intended simply as a pad to protect the trachea and to fill up the contour of the neck. Physiological experiment was then brought into operation and it was proved that the artificial removal of the thyroid gland in animals produced a condition similar to the disease myxœdema in man. Finally, the therapeutic test was supplied. Portions of the thyroid gland of animals were introduced into the tissues or cavities of the human body and it was found that some temporary benefit was the result. Then hypodermic injections of a glycerine extract of the thyroid gland of the sheep were tried with much better results. Later, the internal administration of the thyroid gland of the sheep, either in the natural state or in the form of various extracts and dry preparations, was tried with brilliant and enduring success. The whole history of the recognition and cure of myxœdema is one of the glories of medical science in the nineteenth century, but it is something more than a lucky guess or a happy intuition. It is an admirable example of true scientific method happily devised and patiently pursued to a triumphant conclusion. Further, it supplies medical science with a new principle and one which may be capable of the most far-reaching applications. It seems reasonable to hope that a cure may be found for Addison's disease in the artificial administration of suprarenal capsules, and that if further investigation should confirm the suspicion that diabetes is connected with disease of the pancreas we may be on the verge of discovering a remedy for a common and distressing disease. It is not to be supposed that internal secretions are the characteristic exclusively of the thyroid gland, the suprarenal capsules, and the pancreas. It is probable that they are much more widely distributed in the organism, and a field is here opened to physiological research and therapeutic endeavour which can hardly fail to be fruitful hereafter.

Another leading note in the medical science of this epoch has been the application of surgical procedure to diseases of the nervous system. The results have been in a few cases of almost startling brilliancy. Tumours have been successfully removed from the brain and cases of apparently hopeless spinal disease have been cured by operation. It does not seem, however, that the sphere of surgery in connexion with nervous diseases is likely to be an extensive one, and we may, I imagine, anticipate rather an occasional happy hit than any constant or trustworthy reinforcement of our resources in dealing with these peculiarly intractable maladies. Nor does surgery seem likely to have any considerable career in relation to diseases of the thorax. I recently read a book upon the surgery of the chest and I laid it down with a re-assured mind, feeling that in this department at least there is still a field for the physician. If I may use a form of speech which has become familiar, surgery during the last few decades has pegged out more claims than she is likely to be able successfully to work. We physicians, however, gladly recognise the brilliant position which modern surgery has won for herself. We rejoice in her achievements, her prospects, her imperishable services to humanity.

Such, then, are some of the advances—presented in brief and imperfect outline—which have characterised medical science in the nineteenth century and such are some of the dominant notes of our art towards the close of that epoch. Let us now cast a glance forwards and consider some of the problems which await solution and some of the lines which future progress is likely to follow. While recognising the great progress which has marked recent years and the hopefulness of the outlook we must avoid a tone of over-confidence. Science does much and will yet do more, but nature remains infinitely mysterious. "My chief care," said Sydenham, "in the midst of so much darkness and ignorance is to wait a little and proceed very slowly, especially in the use of powerful remedies, in the meantime observing their nature and procedure and by what means the patient was relieved or injured." Medical science has made large

advances since the days of Sydenham, but this philosophic caution is by no means out of date. We shall receive a lesson in humility if we reflect how far at the present day practice lags behind knowledge, how imperfect a use we make of our present weapons while eagerly seeking to multiply their number. Typhoid fever still flourishes in our midst although it is certain that if we could ensure to the masses of the people pure water, wholesome food, and healthy houses—and this task should not be one of supreme difficulty—the disease would disappear. Consumption still claims 60,000 or 70,000 victims annually in these islands, although we feel well assured that if overcrowding could be prevented, the principles of sanitation strictly enforced, and the segregation of patients secured, the disease would soon become infrequent. We still lack the courage to apply resolutely and impartially the methods which scientific medicine indicates as necessary to prevent the fever-stricken patient from being a source of danger to his own household and to the community. Preventive medicine and the unrestricted liberty of the individual to spread disease are incompatible ideals. We have long followed the latter ideal, but there are indications that the former is growing in popular favour. The passing of the Compulsory Notification of Infectious Diseases Act and its adoption by all the great urban communities are satisfactory signs of a healthier public opinion, and constitute one of the greatest steps hitherto achieved by civilised communities in the direction of freeing themselves from the incubus of infectious disease. That Act has certainly not been applied hitherto in any severe or oppressive manner. If there has been any failure it has been rather in the direction of slackness and timidity. But at least a beginning has been made and it is well to bear in mind that sanitary reform can never go far in advance of public opinion. "To know and counteract the causes of disease before they become effective," says Gull, "is evidently the triumph of our art"; but he very truly adds: "It will be long before mankind will be wise enough to accept the aid we could give them in this direction."

We must all rejoice that the civilised world is at length making a somewhat belated, but still most welcome, effort to stay the ravages of tuberculosis. Much has been recently spoken and written on this subject which did not always proceed from fulness of knowledge or ripeness of wisdom, but we may well forgive something to the zealots of a new crusade—a crusade necessary and salutary and one which has already borne important fruit. The recognition of tubercle as an infective disease, due to a specific virus, and transmissible in ways which are becoming gradually understood, is one of the most substantial advances of the time. But if the new pathology suggests lessons of precaution it affords no justification for panic. Tubercle is infectious, but its infectiousness is of limited range and easily preventable. We may teach with confidence that, granting care and diligence in the disposal of the expectorated matter, the consumptive patient need not be a source of danger to those around him. We may also contemplate hopefully, if with some reserve, the prospects of the hygienic treatment of consumption, which is becoming increasingly popular. While entirely approving of the general theory which underlies that treatment I cannot acquiesce in the proposition recently propounded in the pages of one of our leading reviews that abundance of fresh air and forced feeding constitute a sovereign remedy for tubercle in all its forms and at every stage. We may content ourselves with more modest anticipations; we may claim for the new treatment that it is a substantial advance upon older methods, and that its results, though not seldom disappointing, are sometimes brilliant beyond expectation. Those results will be far more solid and enduring when the disease is more often detected in its earlier stages and when treatment is entered upon while the local damage is still slight and constitutional involvement absent or trivial. In this disease time is a factor of the first magnitude. The earlier manifestations of tubercle are comparatively amenable to treatment, the later are too often irremediable.

One of the most hopeful features of present-day medical science is the ever-increasing closeness of association between clinical medicine and pathology. Never before did the hospital and the laboratory work so fully hand in hand, never before were observation and experiment so fruitfully combined. Clinical physicians are grateful for the large amount of assistance which pathology gives them in the post-mortem room in interpreting the problems of disease, nor are they insensible of the somewhat more limited assistance which pathology gives them at the bedside. The physician, without the aid of the pathologist, may practise—perhaps successfully practise—an art; he can never expound a science. The pathologist, without the aid of the physician, often finds the facts of the post-mortem room a meaningless tangle, or at best a riddle of which the solution can only be guessed. Pathology is an invaluable aid to clinical medicine, but its function is in the main critical, explanatory, and corrective, rather than dominant or regulative. "The art of medicine," said Sydenham, "is to be properly learnt only from its practice and its exercise." In our profession experience is the supreme test, the bedside is the most important training ground, the course of disease and how it can be modified by treatment are in many cases ultimate facts, which no theory can shake and no argumentation can alter.

To seek to anticipate the progress which awaits our art in the coming years, to endeavour to cast the medical horoscope of the twentieth century would be a tempting task, but I can only lightly touch it to-day. That the outlook is hopeful may be safely inferred from the fact that medical science is to-day in possession of new and fruitful ideas and of methods which are still unexhausted. The serum treatment of disease and the doctrine of internal secretion are still only in their infancy. The prevention of tuberculosis, which is really only a phase in the application to medicine of aseptic principles already dominant in surgery, is within sight, although the goal is still distant. The brilliant illumination which Golgi and his school have shed upon the structure and functions of the nervous system may point the way to some therapeutic progress in this most difficult and baffling field. We may well contemplate the future with confidence, feeling assured that whatever disappointments the twentieth century may have in store for us it can hardly fail to witness the growth and development of our art and a corresponding gain to the race in comfort, happiness, and longevity.

While I would urge you to spare no labour in the endeavour to master every branch of your art, I think I might invoke the authority of my predecessor in this chair in cautioning you against a narrow professionalism and in recommending as wide an outlook as possible upon the ever-broadening field of knowledge. The late Dr. Cuming owed no small part of his unique influence to his general attainments and breadth of culture. I know that the medical student of to-day is a much-lectured and a much-examined individual. It may seem a refinement of cruelty to suggest that he should extend his studies beyond the somewhat capacious limits of the medical curriculum. But onerous as without doubt are his tasks, I think he has still a small margin of leisure. I meet him occasionally on the golf links, and I am credibly informed that in a closely adjacent building he does not permit the green baize to be the entire monopoly of the arts and the theological students. Let me plead with you to give some portion of your limited leisure to the study of good literature. When football and cricket, the bicycle, and the cue have had proper and adequate attention paid to them, reserve some margin of time for the poets, the essayists, the historians, and the biographers. If you can enjoy Homer and Horace, Molière and Heine, so much the happier are you, but if not, the field of English literature is wide, it abounds in every variety of literary product, and is practically inexhaustible. Make a daily companion of Shakespeare or Wordsworth or Tennyson—or, if you prefer, of Scott or Emerson or Carlyle—it matters little which you choose so long as you choose among the best. While learning the attachments of the latissimus dorsi or the characteristics of electrotonus do not forget the tale of Troy divine or the immortal knight of La Mancha or the Prince of Denmark. The great masters of literature will help you to that knowledge of life which is hardly less important to you than a knowledge of your profession. "Most men," says Lowell, "make the voyage of life as if they carried sealed orders which they were not to open until they were fairly in mid-ocean." Literature is the record of the accumulated experience of mankind rendered immortal by the salt of genius. Its study can hardly fail to make you more flexible in mind, more tolerant in opinion, more sympathetic in heart. It will also help you to a juster estimate of your profession and of your own place in human society. Your business will be first and chiefly to prevent disease, to cure disease, and to relieve suffering, but you may also each in your sphere do something to hold up the standard of liberal culture and to pass on the torch of knowledge to those who will come after us.

MEASURES TAKEN AT TOR AND SUEZ AGAINST SHIPS COMING FROM THE RED SEA AND THE FAR EAST.[1]

BY MARC ARMAND RUFFER, M.A., M.D. OXON.,
PRESIDENT OF THE SANITARY, MARITIME, AND QUARANTINE COUNCIL OF EGYPT.

IN the first place I wish to express my thanks to you for the honour you have done me in asking me to read a paper here to-night. I greatly regret that owing to the impossibility of getting leave I shall not be able to read the paper myself or to answer any questions. I can only say that if any member wishes to have further information with regard to any point raised in this paper I shall be happy to answer his questions by letter if he will communicate with me at Alexandria. I must begin this paper by describing the present state of the sanitary services in Egypt, for it might appear somewhat strange that I criticise regulations which it is my duty to enforce; but, as will be seen, the regulations are not of my own making.

Egypt is the happy possessor of two sanitary services. The first looks after the sanitation of the whole of Egypt and forms one of the departments of the Ministry of the Interior. The second is under the Sanitary, Maritime, and Quarantine Council of Egypt, and on the Council England, Turkey, Spain, Sweden and Norway, Portugal, Belgium, France, Austria, Germany, Denmark, Russia, Greece, Holland and Italy are respectively represented by one delegate, who may or may not be accompanied by a medical adviser. Egypt is represented by the President, the Inspector-General, the Chief Veterinary Inspector of the Sanitary Service, and the Sanitary Inspector of the town of Alexandria. Every one of the nations represented has one vote, whereas Egypt has three. The President, however, has only a casting-vote and can only use it if the votes are equally divided. All the members of the Board, the President and the veterinary inspector excepted, must either be duly qualified medical men or have the rank of vice-consuls, duly belonging to the Consular Service. The President has no control over the Council or over the finances and staff except what his personal influence gives him. He presides at the meetings and executes the decisions of the Council, but he can neither appoint nor dismiss any official or punish him in any way except by permission of the Council. He is not allowed to spend one sou without the leave of a special committee on finance, nor can he make any reform, be it ever so urgent, without the approval of the Council. I take this opportunity of stating that the medical men who are members of the Council have always—at any rate during my term of office—worked with zeal and singular fairness, looking at most questions from a professional point of view. The presence of the consular element on the board is altogether an anomaly, and in my opinion these gentlemen should have no voice in decisions concerning technical questions. It is little short of ridiculous to allow men to interfere in technical questions when from the nature of their occupation they have had no opportunity of acquiring technical knowledge. The decisions of the Council must be in accordance with the decisions of the Convention of Venice; and, indeed, the tendency of late years has been for the Council to apply such measures only as are clearly laid down by that Conference. Whether these measures are altogether satisfactory or logical, whether they accord with the latest ideas regarding the progress of infectious disease, whether they are not rather a halting compromise between the opinion of the extreme quarantinist and that of the pushing shipping agent who would infect the whole of Europe rather than consent to his ship being delayed 10 minutes are questions which need not concern us at present. I would point out, however, that the united wisdom of Europe sitting at Venice has produced a set of regulations in which the same paragraph orders two contradictory measures to be carried out. The interpretation of some of the paragraphs is more or less guess work.

The point which is of interest this evening is the measures which are being taken to prevent ships which come from the Red Sea and the Far East carrying plague and cholera into Egypt and Europe. The very existence of such regulations shows that Europe tacitly acknowledges the position with regard to preventing the entrance of cholera and plague into any country by quarantine measures. But, as is well known, cholera and plague in spite have passed into Egypt and through the Suez Canal into Europe. The measures vary according to whether the ships carry pilgrims or ordinary passengers. The ships carrying pilgrims from the Hedjaz are not allowed to go through the Canal or to land Egyptian pilgrims into Egypt until the ship and its passengers have undergone a period of observation at Tor. The pilgrimage or Hadj is a yearly occurrence and consists in the visit which all good Mahometans are expected to pay, once at least in their lives, to the Caaba at Mecca and to the tomb of their Prophet at Medina. It is attended by Mahometans from all over Europe, Asia, Africa, and large camel caravans used to leave every year for Mecca and Medina. In former years any danger of the pilgrims bringing back plague or cholera was minimised by the long sea or desert journey. Since the introduction of railways and steamers, however, conditions have changed, and were it not for quarantine regulations an Egyptian pilgrim might go from Egypt to Mecca and return to Suez in little more than a fortnight. The number of pilgrims who pass annually through the quarantine camp of Tor varies from 12,000 to 30,000. The most sacred spot on earth to a Mussulman is the Mosque at Mecca which encloses the Caaba—a black stone which marks the spot where Adam first worshipped on his expulsion from Paradise. It is said to have been placed there by Abraham and Ishmael. Certain it is that it has existed on the spot from time immemorial and served before Mahomet's time for the rites of some idolatrous tribes in the neighbourhood. Since the second year of the Hegira it has been the point to which all followers of the Prophet are expected to turn when at their devotions. Mahomet ordained that it should be visited every year on the 10th of the month, which he fixed as the anniversary of the sacrifice of Isaac and his release at the command of the angel. The second object of the pilgrimage—namely, the visit to Mahomet's tomb at Medina—may be accomplished either before or after this date. As far as El Tor is concerned the pilgrims coming from the West, or Mecca, are divided into two main divisions, which arrive at the quarantine station at an interval of four or five weeks, one after the other. The first lot comprises the Turks, Algerians, Marocans, as well as Herzegovinians, Servians, and Bulgarians, and a goodly number of people from Asia Minor, the Caucasus, Turkestan, and even far-off Mongolia. A picturesque and motley crew they are, showing features and dresses collected from an area of some 4000 miles in length, and embracing stragglers from three continents, all fired with the same religious zeal and bent on the same errand. The second division of the pilgrimage shows less variety of nationality and costume as it consists only of Egyptians and their immediate neighbours the Soudanese, Syrians, &c. These generally visit Mecca first on the appointed date and afterwards Medina, whence they travel to Yambo where pilgrim ships are supposed to await them to bring them up the Red Sea. The Turkish section, on the other hand, invariably visits the tomb of the Prophet first, then the Caaba at Mecca, and leaves Djeddah for Tor some weeks before the Egyptians leave Yambo. The means of transport of these thousands of devotees is totally inadequate, the overcrowding, want of sanitary arrangements, filth and distress of the people resembling exactly the horrors of the slave-ships of the eighteenth century. Indeed, to those who have been eye-witnesses of the facts it is incredible that such a state of things can be tolerated, and it does not redound to the credit of Christianity to learn that the shipowners who are responsible for such mismanagement are practically all Christians. Each ship is licensed to carry a limited number of passengers at so much a head, but each shipowner makes an illegal profit by embarking nearly double the number of passengers allowed by his licence. Of course, the poor wretches who are congregated by thousands at the port will gladly pay full fare to be taken off at once, even if there is only standing room on the ship; for after the hardships of travel—insufficient food, robbery by Bedouins, &c.—which they have undergone their one thought is to reach home at any cost. Consequently many of the ships, though licensed to carry a certain number of passengers, arrive at

[1] A paper read before the Epidemiological Society on Dec. 15th, 1899.

Tor with double that number, and the wretched pilgrims are literally crowded like sardines in a tin, there being barely room to lie down on the deck. The scenes of confusion and filth, with the horrors of sea-sickness and other forms of malady, almost defy description. Old steamers are used for this purpose. On one occasion I saw the boat arrive with a crowd of some 30 women packed together outside the paddle-boxes, a mere flimsy wooden barrier being the only obstacle to prevent them falling overboard; had they met with a rough sea the whole lot must have been washed over. The sanitary arrangements considered good enough for these helpless people deserve to be commemorated by photography. They consist merely of large packing-cases slung over the ship's side, and with a hole cut through the bottom. As a rule, however, the crowding is so intense that it is quite impossible for the pilgrims to reach even these primitive arrangements; and as quite 50 per cent. of the people suffer from diarrhœa they relieve themselves anywhere as best they may. The overcrowding is so great that it is not uncommon to find dead people, lying in the midst of their fellows, covered with fæces and urine. Let it be said at once that the few steamers belonging to the Austrian lines which carry on this traffic are a brilliant exception. The Austrian Government has imposed such heavy penalties on their captains for overcrowding, &c., that their ships are almost perfect from a sanitary point of view. There is some hope that some remedy will be found shortly for the state of things on other boats. Each pilgrim ship carries a medical man; but even should he wish to do so he is quite unable to do anything. For instance, when a death occurs on the way there is reason to fear that the body is thrown overboard and the death stoutly denied. When the death occurs in or near the harbour the captain resorts to the quaintest expedients to hide the corpse, such as hanging it over the side of the ship, &c. It is a peculiar fact that although most of the medical men stoutly deny having had a death between Jeddah and Tor two or three pilgrims invariably die within a few hours of their arrival at Tor. The captain takes as many passengers as he can possibly get on board. In most cases he apparently makes a guess as to the number of people and enters a certain number on the bill of lading; but this number is invariably wrong, as the following table will show:—

Year 1898.

Nationality of ship.	Number of pilgrims on ship's books.	Number actually found.
Turkish	551	667
English	550	627
Turkish	1041	1137
Egyptian	844	928
Greek	700	810
English	695	756
"	1022	1175
Egyptian	530	599
Turkish	987	1181
"	1175	1506
Egyptian	420	607
English	350	390
Egyptian	713	790
Turkish	1220	1738
English	579	731
Egyptian	549	635
Greek	664	698
Turkish	1000	1013
Egyptian	5	5
Turkish	700	924
Egyptian	37	37
—	14,332	16,952

It stands to reason that neither shipowners nor quarantine officials can estimate how much money the ship's captain or agent has actually received, nor how many people have died on the passage.

One word in favour of the Mussulman pilgrim may not be out of season, for he is a person who, in my opinion, has been much maligned. My experience of him extends over a period of three years and I confess to a feeling of great respect and liking for the unfortunate person. Treat him well, and above all give him plenty of water, and the supposed fanatic becomes the most docile, easy-going, grateful, and polite Eastern gentleman. A friendly nod to a group of these people sitting before their tents will cause the whole lot to rise and salaam with a stately grace and a politeness which are not to be found outside the East. Their so-called fanaticism is too often the feeling of bitter resentment for the ill-treatment which they have received from the men in whose hands the pilgrim trade has been up to now.

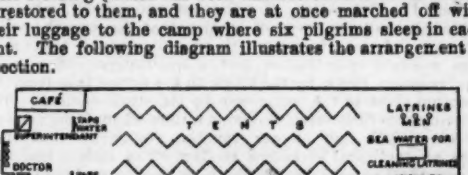
Here I must pause to describe the position of Tor and its advantages as a quarantine post. The port and village of Tor are situated about 120 miles south of Suez on the Sinaitic peninsula at the foot of Mount Sinai. One might almost think that it had been designed for the purpose, as, owing to its geographical features, approach is practically impossible except by sea. At the base of Mount Sinai lies a plain, some 12 miles wide and some 10 miles long. At the northern end of this plain lies the little town of Tor, founded (it is said) by the Empress Helena when she built the monastery on the mountain. The descendants of the original Greek inhabitants still form the greater part of the population of the place and carry on the work for which it was built—namely, of supplying the monks with fish, fruit, and other necessaries. Up till recently they made great profit out of the wrecks which frequently occurred along this dangerous coast. There are a few fresh springs around the town and near these are groves of palms, figs, vines, &c. Over the rest of the plain though water is easily obtainable, it is brackish, and the vegetation is very sparse, serving only to feed the goats of the few natives who eke out a scanty living in this lonely region. Though only about 120 miles from Suez by land the absence of fresh water makes the land journey from Tor impracticable except for a well-organised camel caravan or a hardy Bedouin. It is therefore useless for any pilgrim once landed at Tor to attempt to escape on foot; and to add to the security of the camp Bedouin outposts are stationed round whose duty it is to bring back anyone found wandering about. Even the approach by sea is not altogether easy as the little harbour only affords shelter to small launches and fishing-boats, the entrance between the coral reefs being narrow. All large steamers have to anchor some distance from the shore, and if any unwary pilgrim were to escape and attempt to swim back to the ship he would run a fair chance of being caught on the way back by a shark. In addition to the natural security of its position Tor seems specially fitted for a health camp by its climate. Though in the proverbially unpleasant Red Sea El Tor has a most pleasant climate of its own, being sheltered from the land winds by the huge Sinai range, while it gets the full benefit of the north wind which for 300 days in the year blows down the Gulf of Suez. Even at midsummer this refreshing wind makes the heat of the sun tolerable. It is a rugged but very picturesque spot; the little white town stands out brightly against the blue sea and sky; the tents of the camp and the clumps of palm trees make a pretty foreground; while the bare lofty peaks of Mount Sinai, towering in the background, and the range on the western side of the Gulf present all day an endless variety of colours, from pale misty blue at midday to deep pink and purple at sunset. Within the last few years, and thanks to the liberality of the Egyptian Government, the former primitive arrangements have been considerably altered. Three separate landing-stages have been erected leading to three separate disinfecting establishments; pipe-water has been laid down throughout the camp; a railway has been built for the conveyance of luggage and the sick; and by next year a bacteriological laboratory, post-mortem room, and—I trust—hospitals, will be built. The pilgrims land in small boats on a jetty, along which rails have been laid, and take their luggage in trucks to the disinfecting station. This lies close to the sea at the head of the jetty and the pilgrims wait in a great covered shed outside until their turn comes to enter the camp. The camp lies a quarter of a mile away and a little railway now takes the heavy baggage and the invalids. This camp is divided into compartments of about 150 metres broad and 250 metres long by fences of wire netting 10 feet high; the compartments are now about 36 in number and each can hold 500 people easily. They are not, however, occupied in succession, but an interval of two empty plots is

always left between two lots of pilgrims. Thus, sections 1, 4, 7, 10, and 13 are in use together, so that in the event of a man trying to join friends in another section he has to climb four fences each three metres high and is sure to be seen running across the intervening spaces. Moreover, in case of plague or cholera breaking out in section 1 all the inhabitants can be moved bodily into section 2, and there still will be two wire fences and a distance of 150 metres between them and the next lot of pilgrims. At the entrance to each station there is a picket of soldiers and each lot of 500 pilgrims has its complement of one medical man in charge, two supervisors, and a number of quarantine guardians, sweepers, &c., as well as its own little café, where the pilgrims may buy their food and a few little luxuries. The catering for the whole camp is undertaken every year by one contractor, who competes for this privilege with others of his trade, and the preference is given to the man who can undertake to produce at the lowest rate food of a given quantity and sufficient for a given number of people for a stated number of weeks. Of course, there is a certain amount of grumbling, but the tea, coffee, bread, &c., sold by these caterers are really of very fair quality. Each day rations are served out at the expense of the Egyptian Government to the very poor pilgrims who cannot afford to purchase food. A great difficulty is to supply such a large number as from 4000 to 6000 people with sufficient water, not only for drinking but also for the ablutions imposed on them by their religion before morning and evening prayers. It must be mentioned that Tor is in the desert and that there is only one well containing sweet water. This difficulty has been recently met by a pumping-station which is worked by steam instead of by hand. The water is pumped into a reservoir at the top of a hill from which pipes run into all the sections, hospitals, &c. Now that the well has been improved the water is quite clear and sparkling but with a very slight saline taste. The hospitals up to date are primitive, consisting only of tents and a dispensary, one of the few wooden buildings to be seen in Tor camp; however, there are hopes that more permanent hospitals will shortly be provided. The tents forming the hospitals are divided into four groups, each group being separated from the other by a large intervening space and having a staff of its own. The hospitals are as follows: (1) hospitals for ordinary diseases; (2) hospitals for gastro-enteric diseases; (3) hospitals for cholera; and (4) hospitals for plague. Of these the hospital for gastro-enteric diseases is by far the most important, for the number of pilgrims who suffer from dysentery is enormous. Hardly a day [passes but three or four worn-out old men die from dysentery or its complications. Liver abscesses, secondary pyæmia, and intestinal perforations are of frequent occurrence. Typhoid fever, small-pox, syphilis, and all kinds of strange skin affections occur among the contagious diseases; indeed, the camp at Tor is an immense field for pathological research. Besides these cases we get every year a few cases of gunshot wounds in pilgrims who have been attacked by the wild Bedouin tribes of the Hedjaz.

We may now proceed to examine the international regulations which govern the pilgrimage. The regulations are different, according as to whether the pilgrimage is clean or infected. If the pilgrimage is "clean"—that is to say, if neither plague nor cholera is raging in the Hedjaz—the pilgrims are detained at Tor for three or four days and the vessels which bring them undergo the same period of observation. Only those Egyptian pilgrims or pilgrims residing in Egypt who are furnished with a card stating their place of residence are allowed to land at Suez after a favourable medical visit. Foreign pilgrims may on no account land in Egypt, but must return in quarantine through the Canal to their own countries. The transhipment of pilgrims in Egypt is at all times interdicted. It will be noted that nothing is done when the pilgrimage is "clean" except a period of observation. The authorities which decide whether the pilgrimage is "clean" or infected are the Turkish authorities at Jeddah, Mecca, and Yambo; and it stands to reason that the period of observation of three days is only enforced because the Powers who have signed the Convention of Venice have little confidence in the declarations of the Turkish sanitary authorities. Indeed, this want of confidence is quite justified, for, during my term of office at any rate, the Turkish authorities have never declared the presence of plague at the Hedjaz until the subject had become a matter of public notoriety through other sources. If then the powers rightly refuse to accept the declaration of the Turkish authorities the logical deduction is that all pilgrimages should be considered infected until the pilgrims had been landed at Tor and found to be healthy. The operations of disinfection should be started at once, so that all infectious material should be destroyed except that carried on the body of the person actually incubating plague or cholera. At present the Convention of Venice does not allow of any precautions to be taken until the disease has broken out. They say: "We suspect these people to have plague or cholera material with them, but don't you do anything until you have given the cholera and plague bacillus a chance." The consequence is that a pilgrim might inoculate himself from plague- or cholera-infected clothing after leaving Tor and carry plague or cholera into Europe. I do not say that such a case has happened, but judging from the experience of plague in India, where people contracted plague long after leaving India, such an occurrence is only too likely. Similarly, the vessels and crew of the ship are not disinfected.

The regulations with regard to foreign pilgrims not landing in Egypt are excellent but most difficult to apply However, they have been applied in their entirety during the last two seasons. If the Hedjaz is infected with plague all the pilgrims are subjected at Tor to a quarantine of 12 days, beginning only after the disinfection is quite finished. Should there be an epidemic of cholera in the Hedjaz the quarantine lasts for 15 days after disinfection. The ships carrying pilgrims other than Egyptians then cross the canal in quarantine and return to their respective countries, while those with Egyptian passengers proceed to Ras Abouzoulima and undergo a supplementary observation of three days. The latter are then received at Suez in free *pratique* after another medical visit.

The regulations appear simple enough and would indeed be so were it not that one had to deal with an enormous mass of people arriving by batches of from 500 to 1000 at a time. I have been not a little astonished by the ease with which gentlemen sitting comfortably in Venice and elsewhere speak of the disinfection of hundreds and thousands of individuals. As a matter of fact no measure is more difficult to carry out successfully on a large scale. The ordinary pilgrim coming from Egypt and the North is in many instances a trader, who combines religion with business and brings back with him a large amount of goods to be sold in his own country. Ten or 12 boxes may form the luggage of such a man and I have seen one pilgrim with no less than 60 boxes of luggage. Most of these goods are not such as would easily carry infection, but still the boxes have to be searched and the dirty linen, &c., extracted. The pilgrims are landed in batches of 40 and taken to the disinfecting establishment, where their luggage is searched and all the things requiring disinfection are removed. Linen, bedding, &c., are steamed at 110° C. for 20 minutes, the maximum temperature being ascertained by an electric-signal thermometer and a maximum thermometer. Shoes, slippers, &c, are put for from five minutes to half an hour in a 1 in 1000 solution of perchloride of mercury. All water skins are removed and a tin can closed by a cork is provided instead. While the disinfection is in progress and the goods are removed to the clean side of the building the pilgrim is taken to another room where he takes off all his clothing and is provided with a clean shirt. He then undergoes a physical examination by a medical man. This consists of (1) feeling the pulse; (2) an examination of all the superficial glands; and (3) an examination of the tongue. If there is any sign of fever the temperature is taken and the patient, if necessary, is placed in an isolated hut at a distance of half a mile from the section. Those who show no signs of disease are taken to be douched or bathed in warm sea water, a process which appears to give them great satisfaction. The shirt they wore is removed, their clothing (which has been disinfected in the meanwhile) is restored to them, and they are at once marched off with their luggage to the camp where six pilgrims sleep in each tent. The following diagram illustrates the arrangement of a section.



It will be seen that the fresh-water taps are at one end of the section and the latrines at the other, and rather far distant from pilgrims in the first row of tents. This arrangement is shortly to be altered. The latrines have the usual Oriental seat and sea-water is provided for the ordinary ablutions after defæcation. In each section two sweepers see to the disinfection of latrines. As the pilgrim enters the camp his name is taken and every morning the medical man in charge of the section is bound to hold a roll-call to see and examine every pilgrim. The women, who are but few in number, are examined by a lady doctor. The rule is that in case of cholera or plague breaking out the inhabitants of each section shall be removed into the neighbouring empty space after complete disinfection of all their goods and effects. The persons in contact with the patients—that is, sleeping in the same tent—are especially watched and examined night and morning. Luckily, such a case has not presented itself during the last three years. After the period of quarantine is over the pilgrims leave and go in quarantine through the Suez Canal to their respective homes. The Egyptian pilgrims are landed again at Ras Abou Zuneima, a dreadfully hot, close, and stuffy place, half-way between Suez and Tor, where they undergo another quarantine period of three days. The reason for this extra precaution is not obvious, and I am strongly of opinion that this measure should be suppressed at the earliest opportunity. In order to judge of the value of these measures against plague and cholera it is necessary to give an outline of the way in which patients suffering from these diseases carry infection.

In plague it appears pretty clear that the subject of ordinary mild bubonic plague is not infectious in himself, as the bacillus, except in rare cases, does not leave the body in the excreta in mild cases. The patient in a really bad and infectious case of plague is always so ill that few medical men would fail to recognise the serious nature of the disease and stop him from embarking. A person who has got over plague is, in all probability, not infectious. At any rate, I know of no instance in which a case of plague has been traced to a patient who has left the hospital cured. The length of the convalescence also would keep the patient in hospital so long that by the time he left he would be harmless. As the incubation period of plague does not exceed five days it follows that, provided the rules concerning disinfection are well carried out, provided also that convalescent patients are kept long enough to guard against a relapse, I am of opinion that the measures taken now are sufficient to prevent plague being carried by the pilgrims.

With regard to cholera the case is quite different. We know now that the vibrio choleræ persists not infrequently for as long as 50 or more days, in the evacuations of patients who have had cholera. We know also that during an epidemic of cholera the vibrio choleræ does appear in the stools of persons who at most suffer from slight malaise or diarrhœa, so that the clinical diagnosis of cholera becomes almost impossible in these cases. The only possible way in which this source of error could be eliminated would be by the bacteriological examination of the fæces of every person suffering from diarrhœa. This is clearly impossible for several reasons. In the first instance, quite 50 per cent. of the pilgrims suffer from diarrhœa owing to the bad food, bad water, and the hardships which they have undergone. Pilgrim's diarrhœa is a well-known disease in the East and the term appears to include every form of intestinal derangement, from typhoid fever to cholera. It is clearly impossible to examine the fæces of hundreds of people bacteriologically. Secondly, among the pilgrims at any rate, there has been found in the intestinal contents of several persons a vibrio which so exactly resembles the vibrio choleræ that it cannot be distinguished from it by the ordinary culture and microscopical tests. It was discovered at Tor in 1896, and Dr. Bitter, Dr. Gotschlich, Dr. Galvani, and myself, who examined the cultures, were of opinion that this was the vibrio choleræ. Later, however, it was discovered that there was a slight quantitative, not a qualitative, difference in the reaction given by the vibrio to the serum test from the reaction given to the same test by the vibrio choleræ. This microbe was discovered at Tor at a time when from personal observation I can answer for the statement that there was no "clinical" cholera at Tor. The orders had been given that every case of cramp or vomiting should be at once reported. Every patient coming into the hospital with the slightest intestinal disorder was carefully examined, but not the slightest case resembling cholera was discovered. Whether this microbe is a modified vibrio choleræ or not matters little for our present purpose, but its existence shows clearly that when one has to deal with thousands of persons no practical rule could be framed on the microscopical or bacteriological examination of fæces short of a serum test. The fact cannot be too strongly impressed, therefore, that quite apart from the wilful fraud of those in quarantine and their guardians, quite apart from possible negligence in disinfection, a person can go through a period of quarantine and carry the disease to some other place.

Such are the measures which are taken at Tor against pilgrims. The quarantine station for ships coming from the Red Sea or the Far East, and which do not carry pilgrims, is at Moses' Wells, a desert spot situated about six miles from Suez on the Asiatic shore of the Gulf of Suez. The establishment consists of a disinfecting station, two hospitals, a small lazaretto for passengers, and a medical man's house, kitchen, &c. The disinfecting establishment has two huge disinfecting stoves, baths, douches, hot and cold water arrangements, and is quite a model of its kind.[2] The buildings could not accommodate more than about 50 passengers at most, so that in the case of a big passenger steamer arriving from an infected port and seeking *pratique* in Egypt quarantine must be carried out on board. All ships arriving from the Red Sea are indiscriminately subjected to medical examination at Suez. Vessels from a cholera- or plague-infected port are subjected to measures which vary according to circumstances and which are applied as follows.

Cholera-infected ships.—(*a*) If the vessel be healthy (that is to say, if there has been no case on board at the time of departure or during the passage), it is admitted to free *pratique* after the medical visit, provided that five clear days have elapsed from the time of leaving the infected port. If the passage has been made within that time the ship is kept under observation until the five days are over. The passengers must remain on board or be landed at Moses' Wells and undergo medical examination during their stay. The Council has the right to order disinfection to be done. This arrangement was specially made by the Egyptian Board with regard to healthy vessels hailing from the Mediterranean, and has hitherto been applied to the same class of vessels from the Red Sea ports. (*b*) If the ship be *suspected* (that is, if it had on board a case of cholera at the time of leaving port or at some time during the journey, but not during the last seven days), it is allowed to traverse the Suez Canal in quarantine, on condition of having a medical man and a disinfecting stove on board. Should it not have these it must be retained at Moses' Wells, near Suez, long enough for the disinfection of dirty linen and other suspected objects, the disinfection to be carried out at the sanitary station there. Afterwards the ship may cross the Canal in quarantine. An exception is made if the vessel is a mail boat or passenger boat without a disinfecting stove but carrying a medical man, when it may pass through in quarantine if the sanitary authorities are fully satisfied that the ship was disinfected either on leaving the port or during the passage. A vessel under the same circumstances which has made a journey of more than 14 days' duration, is given free *pratique* after being disinfected. If the passage has taken less than 14 days the boat and passengers are kept for 24 hours at Moses' Wells and are then given *pratique* after disinfection. When the cholera appears among the crew only the disinfection is applied to the soiled linen of the crew alone and is extended also to the crew's quarters. (*c*) If the ship be infected (that is, if a case exists or has existed on board during the past seven days), and if it carries a medical man and a disinfecting stove, it must return to Moses' Wells, where the sick are disembarked and the dirty linen both of the rest of the passengers and of the crew is disinfected on board. Should the cholera have broken out among the crew exclusively, the disinfection is confined to their dirty linen and to the linen of their quarters. All persons who have come in contact with the sick are also disembarked and are kept at Moses' Wells until the completion of five days from the date of the last attack on board. The vessel also must remain there until the fifth day after the last attack, but it is allowed to traverse the Canal in quarantine after landing the

[2] I have no hesitation in saying so, as I had nothing to do with the designing or building of it.

sick and suspected persons and undergoing disinfection. This disinfection is carried out only in the part of the vessel with which the sick persons have come in contact and in the sick bay. The time that the ship is being disinfected is included in the time that it passes under medical observation. If the boat carries neither disinfecting stove nor medical man it must go to Moses' Wells to undergo five days of medical observation to date from the last case discovered on board. The sick and suspected are disembarked and isolated in the hospital. The other passengers are also landed and isolated in as small groups as possible in order that the whole may not become liable should cholera break out in any one group. A thorough disinfection of the contaminated vessel is carried out. The dirty linen, vessels, and clothes both of passengers and crew are alike disinfected. The merchandise is not landed. The passage through the Canal in quarantine is granted after the disembarking of the sick and suspected and when the disinfection has been efficiently carried out.

Ships coming from a plague-infected port.—(*a*) Healthy ships are admitted to free *pratique* after the favourable medical visit. They must in all cases have completed, or be about to complete, 10 clear days from the time of leaving the last plague-infected port. The dirty linen of the crew and passengers is disinfected. The medical visit is always paid during the day. Healthy vessels may also pass the Canal in quarantine if continuing to make up their 10 days. (*b*) Suspected vessels—namely, those on which a case of plague occurred on the date of departure or during the voyage but where no new case has supervened for 12 days past—are allowed to enter the Canal in quarantine on condition of having a medical man and a disinfecting stove on board. If they do not carry both they may go across the Canal only after the dirty linen and other susceptible objects have undergone disinfection. Postal or passenger boats without a disinfecting stove but carrying a medical man may pass through in quarantine in cases where the sanitary authorities are satisfied that disinfection has been carried out during the voyage. Suspected boats which have made a passage of more than 14 days' duration are admitted to free *pratique* after disinfection. If the passage is less than 14 days the vessels with their passengers are detained at Moses' Wells to complete 10 days, after which they are given *pratique* after being disinfected. (*c*) Infected vessels (or those which either have a case of plague on board or have had one within the past 12 days) are kept at Moses' Wells where they land their sick. If they have a medical man and a stove the soiled linen of the crew and passengers are disinfected on board. When plague has broken out among the crew the linen of the crew and of their quarters is alone disinfected. At the same time all persons who have been in contact with the sick are landed and detained at Moses' Wells for 10 days after the outbreak of the last case on board. The vessel itself must remain 10 days at Moses' Wells after the last attack on board, but it may go through the Suez Canal in quarantine after landing the sick and suspected persons and after being thoroughly disinfected. This disinfection is carried out only in the part or compartment of the ship and in the section of the hospital to which the sick persons have had access. The time taken up by disinfection is included in the period of medical observation. If the vessel have neither medical man nor disinfecting stove on board it must return to Moses' Wells to complete (as well as the passengers) a term of 10 days from the outbreak of the last case. The sick and suspected are isolated in a hospital; the rest of the passengers are isolated in groups of as few in number as possible in order that all may not be liable in case the plague should appear in any particular group. A thorough disinfection of the infected ship is undertaken; the dirty linen, the vessels and utensils, and the clothes of the passengers and crew are alike disinfected. The merchandise is not landed. The passage of the Canal in quarantine may be granted after the landing of the sick and suspected and the disinfection of the ships have been entirely carried out.

The Board has no power over merchandise going through the Canal, but the rules with regard to merchandise coming into Egypt from plague- or cholera-infected ports are as follows. Soiled body-linen and garments, bedding, carpets, sacs, and embroideries may be disinfected or their entrance may be prohibited. The same rules apply to any animal refuse, such as hairs, untanned skins, hoofs, &c. Silks and uncarded wools may also be prohibited. Taking merchandise first, it is difficult to understand why animal refuse, silks, or wools should be submitted to any measures, as I am not aware that animals get plague or cholera. The argument that they might bring plague or cholera because they have been stored in dirty places applies just as well to every other form of merchandise. I do not understand why any restrictions should be placed on any merchandise except soiled linen and rags. The East has been infected with plague for more than three years and with cholera for many more years; thousands and thousands of tons of merchandise have gone from infected ports to all kinds of places and so far not a single clear case of infection has been traced to merchandise. I am not aware that a single porter who unloads ships in London or Liverpool has contracted plague or cholera; and when plague has broken out on board ships it has attacked firemen and stewards chiefly who have nothing to do with the merchandise. The same results apply to rats, against which I notice that some nations are taking measures. I am not aware that up to the present any ships have arrived at Suez complaining of the presence of dead rats on board. We have not heard that the rats in London or in foreign ports have begun to suffer from plague, although they must have been in contact with rats coming from infected ports. Nay, more, there is evidence that on several of the ships actually infected with plague no special mortality among the rats has been noticed. Up to the present moment the evidence that rats may carry plague from place to place or country to country is purely negative.

We may now proceed to examine critically the measures which affect the passengers. Persons landed from plague-infected ships are allowed to go to their homes after their period of quarantine is over but their names and addresses are taken down. The native passengers are visited for a certain length of time by the officers of the Sanitary Department of the Interior. The measure is one highly to be commended. The disinfection of the ships as ordered by the Convention of Venice is one which it is not always easy to carry out. The ordinary methods of squirting on pulverised sublimate solution is one in which personally I have no confidence whatever. In one case a ship was disinfected twice in that way and plague cases still occurred, for the fact is that sublimate has practically no penetrating power whatever on the greasy planks of the sick bay or the crew's quarters. In the absence of a good antiseptic a good washdown with soap and water and subsequent flooding with the hose would be far more efficient, as it would, at any rate, mechanically remove the microbes. The best antiseptic for the purpose, however, appears to me to be a 5 per cent. solution of carbolic acid to which a sufficiency of soft soap is added. The water is first heated to boiling-point and the carbolic acid and soft soap are slowly added under constant stirring. This is then well scrubbed in with handbrushes. Those using it should wear indiarubber gloves, as it blisters the hands dreadfully. The clothes which have to be disinfected are always to be disinfected by steam under pressure.

It has already been noticed that only a certain part of the ship and the clothes of the crew are disinfected and that in some cases this disinfection may be carried out without extraneous help by the people on board the ship. Clearly, such rules are little better than a dead letter, for the captain of the ship, in order not to delay his ship, will try to limit the disinfection to the smallest possible space. The crew will hide their clothes—for to a man they believe that these will be spoilt by "fumigation"—so that the chances of disinfection being of any use are minimised. The disinfection on board ship, carried out by the ship's people under the supervision of the ship's medical officer or chief engineer is, in my opinion, little better than a farce. The passengers do not think of giving up their soiled linen because it is too much bother and they fear that it will be spoilt; and, in one case at any rate in which I had the opportunity of watching the operation of disinfection as a passenger, the disinfecting stove was not even screwed down. In other two cases the passengers laughingly boasted how they had each given one or two pairs of socks or handkerchiefs, or, perchance a shirt, which represented their soiled linen for a voyage lasting almost a week. Similarly on landing the medical officer is simply dependent on the word of the passengers as to whether they give him all their dirty linen or not. He cannot, and indeed will not, rummage about the trunks to see that the people have given up their soiled linen, and certainly the passenger's word on such a point is not to be trusted.

It is clear from the remarks which I made with regard the measures taken at Tor that at present there is nothing

prevent ships carrying persons in the incubation period of cholera and plague to go through the Canal to Europe, and that in the end the ultimate measures to be taken must be taken in Europe.

An experience of three years of quarantine work is perhaps not sufficiently large to entitle me to give an opinion on measures which have been signed by the plenipotentiaries of the great and small Powers of Europe. Nevertheless, I may be allowed to express tentatively the opinion which I have formed respecting the way in which the quarantine measures recommended by the Powers do work in practice. At any rate, I have had ample opportunities of seeing that. Now, I am very strongly of opinion that any measure which is recommended should be such that it can be applied. With regard to the pilgrimage, the measures are fairly satisfactory because the pilgrims at Tor are, so to speak, in our power and because time is of little object and the disinfecting plant is sufficient. With regard to the measures for passengers entering Egypt a good deal can be done, because here again the measures can be applied with a certain amount of success. A captain might possibly hide a case of plague or cholera, but should the case be fatal suspicion would be aroused by the very fact of there having been a death on board. The other measures which are taken for suspected and infected ships which transit the Canal in quarantine or are detained for disinfection at Suez, are, in my opinion, useless for the most part because they are avoided and, as long as human nature is what it is, will be avoided. The measures which might be carried out with a fair amount of success are those which affect the sick person only, and not the crew, passengers, and ship. A ship's captain has no objection to landing a person sick with plague and cholera and his kit. He will only be too glad to do so, as experience has shown; nor will he have much objection to his cot and neighbouring cots being disinfected. But he will try to oppose any landing of men who have been in contact with the patient, because if the sick man has been in the same room as his companions the captain might lose half his crew by the application of this method. I know of one captain who stoutly maintained that no one but the steward had visited the patient, when the medical officer had had ocular evidence that most of the crew had been in contact with the sick man. Similarly with disinfection, the captain does not object to the patient's kit and bedding being disinfected or thrown overboard, but most of the crew and passengers will do their very best to hide everything which they can possibly hide. And, indeed, there is no reason why they should not, for the measure is absurd in itself.

These measures of wholesale disinfection are really based on the old idea that cholera and plague are conveyed by air, and on that theory it is supposed that a ship becomes infected from end to end by a plague or cholera case. But now that it is known that a cholera or plague patient is only dangerous by his dejections it is high time that such measures should be abandoned. The disinfection should be strictly limited to (*a*) the linen of the patient or the bag or trunk in which the linen has been placed and to (*b*) the cot and cabin of the patient.

With regard to the landing and segregation of the contacts it is an excellent measure theoretically, but from the practical point of view in no case so far have I seen it do any good.

In the case of the *Mehalla*—a ship coming from Jeddah, in which a case developed plague the day after its arrival at Suez, where it took *pratique*—the ship's medical officer, who would certainly not have been landed had the ship gone through the Canal in quarantine, got plague and died. Four of the crew afterwards showed suspicious symptoms, although the ship had meanwhile been disinfected twice with sublimate, but these patients were in no particular relationship to the patient and would certainly not have been considered as contacts. Their mode of infection was doubtful. No dead rats were found on board till after disinfection with sublimate. There was no evidence to show that these rats had died from plague, but they had probably died from the disinfectants scattered about the ship.

The following is the number of the ships of which I have notes which had plague or cholera on board before getting to Suez and the history of the contacts. The s.s. *Glanson* had eight cases of, and four deaths from, cholera on board from April 27th to May, 1895. The vessel arrived at Suez on May 21st, 1895. No contacts were landed. The s.s. *Dilwara* had one case of plague on board on March 18th, 1897. Three persons landed. There was no case of plague among the contacts. The s.s. *Britannia* had three cases of cholera on board. Two of the sick were landed at Moses' Wells on August 16th, 1897. No contacts were landed. The s.s. *Caledonia* had two cases of plague on the day of its arrival at Suez. Two contacts were landed but were not attacked. The s.s. *Dictator* had two cases of plague on board when the ship arrived at Suez. All the members of the crew were kept 10 days at Moses' Wells, but no case of plague occurred among them. It will be noticed that in two cases the contacts are conspicuous by their absence and that, as a matter of fact, not a single person isolated as a contact developed plague or cholera afterwards. A strict logician would not fail to argue that contacts are less liable to plague than others.

To conclude, I believe that the measures ordered by the Convention of Venice for the pilgrimage are adequate so far as plague is concerned. To a great extent the regulations can be carried out with a fair prospect of stopping an epidemic of plague and of sending the pilgrims out free from plague bacilli. With regard to cholera I am of opinion that a quarantine of several weeks will not ensure safety. One may diminish the chances of infection but not abolish them, and the only safety is the watching of the pilgrims after their arrival in their homes. Similarly, the measures applied to the passengers landing in Egypt can be applied with a fair hope of success. The transit of ships through the Canal in quarantine affords some security to Egypt but none to Europe, as experience has repeatedly shown.

The measures of disinfection bearing on the linen of the whole of the crew and passengers are, in my opinion, bound to be a failure, because, short of searching and emptying out a whole ship, many of the articles will be concealed. Further, I am of opinion that such a measure is not expedient and that the disinfection should be limited to the linen, clothing, and quarters of the sick patient. Similarly, no person should be landed except those whose temperature is raised or who are actually showing symptoms of plague or cholera. Experience has shown that those who have been landed because they had been in contact with patients did not get either plague or cholera.

Lastly, my opinion on questions of quarantine, ship disinfection, &c., is that it is better to do a little well and thoroughly than a great deal badly. That when we remember that it takes five minutes for a surgeon to clean his nails, the disinfection of a large number of persons is not likely to be done satisfactorily in a short time. The great danger is the patient, the things in his immediate neighbourhood, and his soiled linen, and it is comparatively easy to deal with them; but when an attempt is made to enforce measures which affect healthy people and entail pecuniary loss the door is open to every form of fraud, concealment, bribery, and corruption. Personally, I feel sure that we should be far more likely to know the truth were it not for the fear of delay produced by quarantine measures. Hence I am of opinion that all measures for ships going through the Canal in quarantine should be abolished except the landing of the sick and the disinfection of the sick person's quarters and linen.

Alexandria.

SOME NOTES ON SERO-THERAPY.

BY H. W. MILLS, M.R.C.S. ENG., L.R.C.P. LOND.

THE cases on which these notes are based consist of one case of tetanus treated with anti-tetanic serum, one case of puerperal fever treated with anti-streptococcic serum, and 76 cases in which anti-diphtheritic serum was injected—27 times for the treatment of existing diphtheria and 49 times prophylactically in cases of relatives who had been in close contact with diphtheritic patients.

The reporting of cases in which anti-streptococcic and anti-tetanic serums were used needs no apology; all such cases, successful or not, should be reported, as the serums mentioned are still on trial. And the same remark will apply to the prophylactic use of anti-diphtheritic serum; if it be conclusively shown that the latter confers complete and undoubted immunity against diphtheria—even though it be for a short period only—it becomes the duty of the medical

attendant to insist on the immediate prophylactic inoculation of all relations and attendants who have come, or must necessarily come, in contact with the diphtheritic patient—including himself—thereby setting a good example which is frequently needed in the case of ignorant patients, who often regard such a procedure, like vaccination, as an unpleasant and useless innovation and an excuse on the part of the medical man for extorting fees.

CASE 1. *Tetanus treated by anti-tetanic serum; death.*—A lad, aged 18 years, was run over by a tram-car, sustaining a severe contusion of his left foot and a lacerated wound two inches long on the under surface of the same heel. His boot was cut through and a good deal of dirt (including very possibly more or less horse dung) was forced into the wound. The wound was dressed and in five days he returned home, walking about with the help of a stick, the foot being bandaged up; up to this time he felt quite well. On the sixth day symptoms of tetanus appeared and on the seventh day, when I saw him at 5 P.M., he was lying on his back in bed, general spasms occurring every few minutes; the head was strongly retracted and risus sardonicus and opisthotonos were well marked. His attendants could not get him to swallow anything as the attempt immediately brought on a spasm. One drachm of bromidia was with difficulty given by the mouth and ordered to be repeated, if possible, every two hours. An enema containing one drachm each of chloral and bromide of potassium and half a drachm each of tincture of opium and tincture of belladonna was given at once. The wound was thoroughly cleaned, swabbed with pure carbolic acid, and hot fomentations of strong solution of chlorinated soda were continually applied. At 4 P.M. he was worse, was quite unable to take any medicine, and the spasms were continuous. 10 cubic centimetres of antitetanic serum (British Institute of Preventive Medicine) which had been meanwhile procured were injected under the skin of the abdomen. The pulse was 120 and the temperature was 99·4° F. At 10 P.M. general spasms were almost continuous. The patient could open his mouth a little. 20 cubic centimetres of serum were injected and a hypodermic injection consisting of one-third of a grain of sulphate of morphia and $\frac{1}{150}$th of a grain of sulphate of atropia was given. On calling next morning at 8 A.M. I found the patient dead. I was told that he had had a good night, the spasms having completely ceased within an hour of my leaving the previous evening. He slept until 3.30 A.M. when he was able to open his mouth wide and take food easily. About 4 A.M., however, violent spasms re-commenced and persisted continuously until 7 A.M. when he became cyanosed and died—obviously from asphyxia. Looking back at the case I do not think that he was given enough serum—another time I would give two or three times as much. The serum certainly appeared to me to do some little good. The mouth, which had previously been tightly closed, could be opened slightly six hours after the first injection, and a very marked improvement was apparent after the second injection. It is at any rate possible, and it seems to me not improbable, that if the last violent and fatal bout of spasms had been controlled by chloroform and another large dose of serum meanwhile been injected he might have recovered. This case occurred in 1897, before, as far as I am aware, intra-cerebral injections of anti-tetanic serum were in vogue.

CASE 2. *Puerperal fever; treatment by anti-streptococcic serum; death.*—The patient, a woman, a multipara, aged 46 years, had suffered from suppurative erysipelas of the scalp, for which several incisions had been made and the pus let out. The discharge had not quite stopped when, on April 5th, 1899, she was confined after a severe labour, an uncertified midwife, who had previously dressed the wounds in her scalp, attending her on this occasion. I was called in as the placenta "would not come." I expressed it easily by Credé's method, giving a hot vaginal douche of creolin afterwards. On the following day the temperature, which previously to her confinement was 99·4° F. and the pulse 80, rose to 102·5° and an offensive vaginal discharge appeared. The uterus was explored with the finger, an intra-uterine douche of perchloride of mercury, 1 in 2000, was given at once, and hot vaginal douches of permanganate of potash were ordered every three hours. A mixture of quinine and iron was given internally and an iodoform pessary was inserted into the vagina every night. On the 8th the temperature was 103°, the respirations and the pulse were rapid, and an offensive diarrhœa appeared, the motions being passed involuntarily. On the 9th there were severe abdominal pain, tympanites, severe diarrhœa, paresis of the legs, stomatitis, and the face was flushed. On the 10th the temperature was 103° and profuse sweating and diarrhœa and phlebitis in the left thigh were present. The patient looked very ill. The pulse was 190 and the respirations were 44. 20 cubic centimetres of anti-streptococcic serum were injected under the skin of the abdomen. On the 11th, at 2 P.M., the temperature was 102°, the pulse was 160, and the respirations were 68. 10 cubic centimetres of serum were injected. At 8 P.M. the temperature was 99·4° and there was an offensive vaginal discharge. The uterus was washed out with a pint of a 10 per cent. creolin solution. No offensive discharge after this occurred until death. On the 12th, at 2 P.M., the temperature was 98·4°, the pulse was 140, and the respirations were 56. The patient was taking food well and had as much brandy as she desired. 20 cubic centimetres of serum were injected. At 8 P.M. the temperature was 100·6°, the respirations were 41, and 10 cubic centimetres of serum were injected. On the 13th, at 2 P.M., the temperature was 101°, the pulse was 130, and the respirations were 60. She slept well, but the respiration was very bad, and she had occasional attacks of cyanosis. 10 cubic centimetres of serum were injected. At 8 P.M. the temperature was 99°, the pulse was 160, and the respirations were 55. 20 cubic centimetres of serum were injected. On the 14th, at 2 P.M., the temperature was 101·6°, the pulse was 104, and the respirations were 50. The patient seemed and felt much better and wanted to get up. She was taking food well and had had a good night save for occasional attacks of cyanosis and dyspnœa. 10 cubic centimetres of serum were injected. At 8 P.M. there was severe pain in the chest, the temperature was normal, and the respirations were 60. She had two severe attacks of cyanosis with dyspnœa. 20 cubic centimetres of serum were injected. On the 15th the patient felt much better and sat up in bed to wash herself; immediately cyanosis and dyspnœa resulted and she fell back dead from syncope. In this case 140 cubic centimetres of anti-streptococcic serum were given in all in the course of five days and the treatment certainly seemed to do good. The temperature fell to normal within 24 hours of the first injection and though it rose the same evening to 100·6° it was normal again on the evening before her death. A sample of blood taken on the day previously to her death was examined by the Jenner Institute of Preventive Medicine and was found to be sterile. This was a very disappointing case as the patient, having fought the battle and apparently with the help of the serum recovered, died from syncope the result of sudden unnecessary exertion which ought not to have occurred.

Of the 27 consecutive cases of diphtheria treated with anti-diphtheritic serum all recovered. 24 of them were cases of moderate severity; the remaining three were very severe cases, one of them requiring tracheotomy. 1500 units were used if the case was seen on the first day, and from 3000 to 6000 if injected on subsequent days. The tracheotomy case was not injected until the third day and serum—4000 units—12 months old was used. Burroughs and Welcome's serum was used in all cases. Six of the cases showed post-diphtheritic paralysis. All were inoculated, with full antiseptic precautions, under the skin of the abdomen. Five cases exhibited antitoxin rashes, urticarial or scarlatiniform, from the seventh to the thirteenth day after inoculation. No case of abscess at the point of injection or joint pains occurred. In the 49 cases in which anti-diphtheritic serum was used prophylactically no case of diphtheria occurred, though the cases treated thus were all relatives (with the exception of myself and a nurse) living in close intimacy, sleeping in the same room and often in the same bed as a patient actually suffering from diphtheria, and inhabiting mostly small cottages. I have not the slightest doubt but that many of these cases would, if they had not been protected, have caught diphtheria. In several cases the children of a family succumbed one after another until the parents, fearing lest the whole family should be prostrated, finally and unwillingly allowed the rest to be protected by inoculation, when the progress of the disease was at once stopped and no further case occurred.

Finally, it seems to me that the prophylactic use of anti-diphtheritic serum confers complete immunity for a certain period—the length of which is not known—and should be

resorted to as unhesitatingly as vaccination is resorted to in the case of the relatives and immediate attendants of a small-pox patient. There is no pain, no after effects, no interference with a person's ordinary pursuits, and, above all, it relieves the mind of nervous persons from the dread of catching diphtheria.

Ruardean, Gloucestershire.

EXTENSIVE MEDIASTINAL EMPHYSEMA IN A FATAL CASE OF LARYNGEAL DIPHTHERIA;

WITH REMARKS ON THE EARLY AND THE LATE VARIETY OF EMPHYSEMA OBSERVED IN THE CASE AFTER TRACHEOTOMY.

BY WILLIAM EWART, M.D. CANTAB., F.R.C.P. LOND.,
SENIOR PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE BELGRAVE HOSPITAL FOR CHILDREN;

AND

H. BUCKLEY RODERICK, M.B. CANTAB.,
L.R.C.P. LOND., M.R.C.S. ENG.,
HOUSE PHYSICIAN TO ST. GEORGE'S HOSPITAL.

THE following case is a striking illustration of a complication to which diphtheria of the larynx and trachea is liable in spite of tracheotomy and of antitoxin, and the fatality of which is probably attributable to the cardiac and pulmonary embarrassment set up by the increasing distension of the areolar tissue of the anterior and posterior mediastina and of the root of the lungs. Contrary to expectation the heart, which was found to be in a state of almost complete systole, was free from dilatation and from fatty degeneration, and the question arises whether the filling of the auricles and the diastolic recoil of the ventricles may not have been materially impeded by lateral pressure.

The patient, a healthy-looking and well-nourished female child, aged five years, was admitted into St. George's Hospital on Oct. 22nd, 1899, at 8 P.M., after an attack of threatening suffocation at 5 P.M. She had been suffering from "a bad cold" for some days. There were much difficulty of breathing, laryngeal stridor, marked retraction of the lower ribs, and deficient entry of air. The chest was resonant over the normal areas. Both tonsils were slightly enlarged, and a small patch resembling a blocked follicle was seen on the left tonsil. Knee-jerks were present. The temperature was 100° F. No albumin was present in the urine. The patient becoming rapidly worse in spite of grey powder internally, the steam tent, and hot fomentations to the neck, tracheotomy was performed at 11.15 P.M. under chloroform. The breathing was immediately relieved and no membrane was ejected. 4000 units of antitoxin were injected immediately after the operation. The patient had a very fair night, breathing quietly. The inner tube was removed twice, but no membrane appeared. On Oct. 23rd slight emphysema was noticed over the cheek and a little over the chest. The temperature was 99 2°. The patient had a very quiet day. A little thin mucus was coughed up through the tube from time to time without difficulty. During the night the cough was rather troublesome, but there was less mucus and no membrane. On the 24th the patient was very restless. At 11 A.M. five drops of olive oil were dropped through the tracheotomy tube. The child seemed relieved and coughed up some thick mucus or membrane and went to sleep. At 3 P.M. she had a sudden bad attack of difficulty of breathing and she tried to sit up. The tracheotomy tubes were both clear. The house physician having passed a catheter down the tube and loosened some thick membrane the child was immediately relieved. Five minims of creasoted oil (1 in 20) were directed to be dropped into the tube every two hours. At 7.30 P.M. the patient had another sharp attack of difficulty of breathing. The house surgeon removed the tracheotomy tube, but when it was replaced a violent fit of coughing was set up during which emphysema spread all over the face, forehead, neck, and chest. When the tube was again removed the breathing became easier. A larger tube was placed in the trachea, but the breathing continued bad with slight retraction of the lower ribs and the child remained much exhausted. On Oct. 25th, at 1 A.M., the house physician was again sent for and the inner tube was removed. The breathing becoming much worse when the inner tube was replaced this was left out altogether. The breathing remained difficult although the tube appeared to be quite free. Oxygen inhalation did not relieve the condition and retraction of the head commenced. At 10 A.M. there was much collapse, the breathing was bad, and there was poor entry of air into the chest, which was fairly resonant on percussion. The large tube was removed and the original small tube was replaced. The breathing was not relieved. Oxygen inhalation was renewed. At 2.45 P.M. the patient was moribund with occasional gasps and the pulse was imperceptible. Artificial respiration, amyl nitrite inhalation, and injection of two minims of strychnine were tried in vain and the child died at about 2.55 P.M.

Necropsy.—The post-mortem appearances 24 hours after death were as follows. There was great subcutaneous emphysema of the neck, face, and eyelids, the aspect being very similar to that met with in acute renal dropsy. Neither fluid nor adhesions were found in the pleural cavities. The lungs showed localised patches of collapse. On section they were congested and pressure caused the extrusion of a little purulent material from the divided bronchi. There was great emphysematous swelling of the loose tissue in the anterior and posterior mediastina and about the roots of both lungs. This extended up around the trachea, but owing to the density of the tissues was not so considerable. The trachea showed a tracheotomy wound with sloughy edges and pus in the tube. The true and false vocal cords and the under-surface of the epiglottis were abraded and small shreds of a membrane-like substance were recognisable about the epiglottis. The tonsils were practically normal and the soft palate was merely œdematous. There was an excess of slightly turbid pericardial fluid which held in suspension a few small flakes of fibrin, but there was no evidence of acute pericarditis. The heart was contracted but otherwise normal. With the exception of cloudy swelling of the liver and kidneys the other organs were also normal.

Remarks.—We are reminded by this case that after the relief of a membranous obstruction of the larynx by tracheotomy a membranous tracheitis may still remain and may be latent for a while, and that it is important to frame our treatment from the first in all cases with a view to this possible contingency. The existence of a false membrane lining the trachea and bronchi was not suspected until its detachment led to a suffocative attack; and after the operation the air entry was so good that the precaution of introducing creasoted oil into the trachea immediately after the tracheotomy and every two hours subsequently was not adopted until it was too late for it to be of any service. The case also affords an instructive demonstration of the mode of production of the two varieties of subcutaneous and mediastinal emphysema. That which was immediately induced by the tracheotomy is well known to be a frequent complication of that operation. It is essentially an early occurrence connected with the patency of recently divided planes of connective tissue. The other form of emphysema which is less common after tracheotomy[1] is more likely to occur at a later stage, when the distension of some of the pulmonary alveoli under stress of bronchiolar obstruction has gradually reached bursting point. In this instance it occurred 48 hours after the operation at a time when the edges of the wound were consolidated by inflammation and presumably rendered air-tight by suppuration. More distinctive than this relative lateness, which is not an invariable feature, are the suddenness and the rapidity of the development of the swelling after expiratory strain—in this case that of violent and prolonged coughing—which contrasts with the more gradual air-infiltration of the inspiratory form of emphysema.

The experiments of Dr. Champneys,[2] whose exhaustive investigation covers the whole ground, have shown that, whilst even the strongest artificial respiration fails to burst the trachea or the bronchi air may be sucked from the wound into the areolar tissue and may set up subcutaneous and mediastinal emphysema immediately or soon after

[1] Dr. J. K. Fowler (The Diseases of the Lungs, by Fowler and Godlee, 1898, pp. 181, 182) gives several cases which may include, besides a case in which tracheotomy had not been performed, instances of this non-traumatic variety.

[2] Experimental Researches in Artificial Respiration in Stillborn Children and Allied Subjects. London: H. K. Lewis. 1887.

tracheotomy. With special reference to the emphysema of the neck which sometimes occurs during labour and during vio ent expiratory efforts, he says: "The mediastinal emphysema of tracheotomy is *inspiratory;* the mediastinal emphysema of violent expiratory efforts is expiratory ..... This emphysema is essentially *expiratory* in its nature and due to a cause entirely opposite to that which is answerable for emphysema of the mediastinum after tracheotomy. In saying this it is conceivably possible that expiratory emphysema might occur after tracheotomy, though the conditions under which the operation is performed are well known to obstruct inspiration rather than expiration. In this case the operation would have nothing to do with the emphysema." The occurrence which Dr. Champneys regards as conceivable was observed in this instance as a separate event; but it may have been partly brought about as a result of the slight surgical emphysema originally due to the tracheotomy, which by loosening the pleural fold[2] at the root of the lung may have deprived some of the alveoli of their normal support, and this may have led to their rupture under excessive distension during expiratory effort. Artificial respiration had been applied for so brief a period after the occurrence of apparent death that it can hardly be held responsible for the production of the emphysema, which, moreover, was noticed in the neck before artificial respiration was performed.

In the absence of any known means of relieving its results or of checking its progress a recognition of this serious complication of diphtheria is a guide to prognosis rather than to treatment. The leak of air in this form of emphysema is beyond the reach of any local measures. An obvious indication would be to allay the tendency to cough, but in carrying this out too completely we might deprive the patients of the only means of clearing the tubes of their obstruction by diphtheritic products.

The continuous inhalation of oxygen through the tracheotomy tube, inasmuch as it favours a diminution of the respiratory efforts and a relative apnœa, would seem to be the most appropriate form of respiratory treatment.

ANATOMICAL AND AGE DISTRIBUTION OF THE TINEÆ OF SOUTHERN ASSAM.[1]

BY S. ARTHUR POWELL, B.A., M.CH. R.U.I.

IT is a remarkable fact that in 11 years' practice in Assam, where almost every individual at some time or other suffers from "dhobi's itch"—tinea of the body—I have never met with a single case of ringworm of the scalp. Tinea of the nails is very common here, but in England it is so rare that a single case is considered worth showing as a curiosity in our dermatological societies. In the past few months I have taken note of all cases of ringworm coming to my hospitals. They were 1407 in number. In all the body was attacked; in 211 the nails were attacked; but in none was the scalp affected. I have collected for comparison the figures given for Britain by McCall Anderson,[2] Adamson,[3] and Pernet.[4] Of their 633 cases 142 were of the body, none were of the nails, and 491 were of the scalp—a very striking contrast.

In the district of Kalain the anatomical distribution of tinea seems to be mainly influenced by the form of dress worn by the patient. When the European sweats the first parts of his clothing to become soddened and "fuggy" are the armpits of the vest or shirt and the fork of the trousers. The European is most frequently attacked by "dhobi's itch" on the inner aspect of the thighs and axillæ, which are in contact with the sweat-soddened clothes. The male coolie and Bengali generally wear a loin-cloth tied tightly round the waist, and when they are hardest at work they "gird up their loins," drawing the loin-cloth firmly into the fork. The rest of the clothing is loose and flowing. The native male suffers almost always from a girdle of ringworm where the tightened cloth soaks up the sweat as it trickles from the upper parts of his body and also in the fork. The women, Bengalis, both Mussulmani and Hindu, coolies, certain hill tribes, Kukis, and Mikirs, wear a "sari," a cloth some 20 feet in length, of which the first folds are tied firmly round the waist, the remainder being draped loosely over the rest of the body. The profuse sweat which the "perpetual vapour bath" of this climate produces keeps the skin and the cloth in contact with it continually sodden. Hence whatever portion of the skin of a woman of the above castes may be the seat of ringworm there is almost invariably a belt of the eruption found round the waist. On the other hand, Manipuri and Cachari women wear the clothes suspended from above the breasts, there being no belt or constriction round the waist. Ringworm in these women shows no special predilection for the waist.

Age incidence.—While in Europe the vast majority of ringworm patients are infants and children, here the disease is very rare before puberty. The youngest of my 1407 cases was a lad aged 13 years.

The fungus.—The fungus would be classed by Sabouraud as the megalosporon. Both spores and mycelia are scanty as compared with the growth in tinea tonsurans. The spores when stained and mounted in balsam measure from 2·5 μ to 5·5 μ, varying greatly in the same specimen. When examined in glycerine or in a solution of potash the spores seem still larger. On Sabouraud's *milieu d'épreuve* the fungus from the same case often gave rise to growths of varied appearance. The rule was a fawn-coloured dust-patch, sometimes of a target-like appearance, from different shades of brown in concentric rings.

I am quite unable to associate any definite clinical appearances with variations in the size of the spores or the character of the cultures. I at one time thought that in the scaly annular or gyrate variety the larger spores predominated, while the spores were smaller and the mycelium more scanty in a variety characterised by large continuous patches and the frequent occurrence of a pustular folliculitis. Lately I have not unfrequently found the conditions reversed. The latter variety is the harder to cure and more liable to relapse, probably owing to the survival of spores in the depths of the follicles.

Tinea versicolor.—It was with a feeling akin to shock that I read in the *British Journal of Dermatology* for October, 1899, Dr. Bosanquet's statement that tinea versicolor never occurs on the face. I find that McCall Anderson at page 592 of his "Treatise on Diseases of the Skin" says that "it is very rarely seen on the face," and on the next page he uses the words "never on the face." Liveing[5] says: "It is hardly ever seen on the face." In this district it is very commonly situated on the face. Of patients whom I have seen this day no fewer than seven had tinea versicolor on the cheeks and chin. I verified my diagnosis with the microscope in all seven cases. The fungus differs in no way from the microsporon proper of Europe. The reason for the frequency of facial tinea versicolor in Assam and its rarity in England seems to me to be that soap is an excellent cure and preventive of the disease. In England the lower classes wash the face with soap and water probably once a day. A complete bath is perhaps a rarity; I am over-stating the average if I estimate it at as once a week. The skin of the body is in England heavily handicapped in this respect. The native in Assam, however, shows no favouritism to his face in the matter of ablution. When he bathes he gets into a river or tank and washes the whole body. He, however, very rarely uses soap. The only European whom I have seen with tinea versicolor of the face was a patient who was advised not to use soap when bathing in India as it was "a cause of malaria." Tinea imbricata I have never seen in this district.

Kalain, Cachar, India.

[2] As regards the probable seat of rupture in these cases, observations which I have made as to the local differences in the strength, thickness, and adaptation of the pleural investment of the lung have led me to believe, in agreement with Dr. Champneys's experimental observations, that the bursting of the lung takes place at the pulmonary root either anteriorly, as he thinks, or, as I am inclined to believe, at the back, close to the reflexion of the pleura over the bronchus. In this situation it finds a ready escape forwards into the root of the lung and into the anterior mediastinum, upwards into the neck, and backwards into the posterior mediastinum.—*W. H.*

[1] An abstract of a paper read before the Surma Valley Medical Society.

[2] Treatise on Diseases of the Skin.

[3] Transactions of the Third International Congress of Dermatology.

[4] THE LANCET, Oct. 1st, 1898, p. 868.

[5] Handbook of Skin Diseases.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

TWO CASES OF TUMOUR OF THE VAGINA.

(Under the care of Dr. A. H. N. LEWERS.)

THE etiology of cysts of the vaginal wall cannot be said to be yet fully settled. The most commonly received opinion is that they are derived from glands and are therefore retention cysts. Veit has attributed them to a persistence of the lower end of the Wolffian duct, that is Gärtner's duct, but neither hypothesis would serve to explain the histological structure of the cyst met with in the first case described below. This cyst is not unlike one described in 1894 by Geyl.[1]

CASE 1.—A woman, aged 41 years, was admitted into the London Hospital on March 18th, 1899, complaining of a bearing-down pain in the lower part of the abdomen. The patient was married 21 years ago and had had three children, the last 10 years ago; she had never had any miscarriages. For the last three months she had suffered from a pain, bearing down in character, in the lower part of the abdomen; the pain was relieved by lying down. She had vomited occasionally after taking food. Two months before admission she saw a medical man who recommended her to wear a cup-and-stem pessary. This did not relieve the pain at all. On March 20th she was examined by Dr. Lewers, who found that there was slight prolapse of the posterior vaginal wall and to it was attached a cyst, the lowest point of attachment being about one inch above the vulvar orifice. The uterus was of normal size and position and was fairly moveable. On March 25th Dr. Lewers operated. An anæsthetic having been administered the cyst was drawn down by means of forceps and the mucous membrane of the vagina was incised all round. The cyst, which was of about the size of a small egg, was then dissected out entire. Three stitches were put in the vaginal wall and two pressure forceps were left on bleeding points, and the vagina was packed with iodoform gauze. On the next day the gauze was removed and a day later the forceps were taken off. The temperature was practically normal all the time, with the exception that it rose to 100° F. on the evening of March 27th. The patient left the hospital on April 7th.

The cyst was sent to the Clinical Research Association where it was examined by Mr. Targett, who reported as follows: "The specimen consists of a spherical unilocular cyst the cavity of which measures one inch in diameter (after immersion in spirit). About one-half of its exterior is covered with the mucous membrane of the vagina, which is closely adherent to the wall of the cyst. The cavity is filled with a yellowish-white, soft substance composed of shed epithelial cells, fatty and granular material. On chemical examination a little fat was extracted from it, leaving a considerable organic residue, the ash of which contained calcium phosphate in small amount. There was no cholesterin in it. Histologically the wall of the cyst is made up of laminated fibrous tissue, lined by a single layer of columnar epithelial cells. In places these cells are somewhat flattened by pressure, but they are nowhere stratified as in dermoid cysts."

CASE 2.—A married woman was admitted into the London Hospital on Dec. 28th, 1898. She had been married 10 years and had had two children, eight and three years ago respectively, but no miscarriages. Two years before attending at the hospital she first noticed a small swelling presenting at the vulvar orifice; it caused no pain and at first did not give rise to any discomfort. She had had some treatment, but no benefit had resulted. The swelling gradually increased in size and caused some discomfort, but it was possible until shortly before admission to return the swelling into the vagina. About a week before admission the swelling, which had previously been quite dry, became moist and the discharge increased in amount; it was watery and offensive. Menstruation had always been regular and normal, and her general health had always been good. A week before entering the hospital she had had a ring pessary placed in the vagina, but it was removed after five days. Two days before admission she had a "shivering fit" while at work. It lasted some hours, but by the next morning she was better though her appetite failed. On admission her temperature was 102° F. but it fell the next morning to 100°. On abdominal examination Dr. Lewers found a swelling reaching to within three fingers' breadth of the umbilicus and rising from the pelvis. Protruding from the vagina was a swelling about four and a half inches long; at the point where it protruded from the vagina it was two inches in diameter but lower down it was three inches. The external os was just at the level of the vulvar orifice and appeared to be quite healthy and the sound passed four and three-quarter inches. The tumour was lying to the right of the os and its surface was formed by the vaginal wall which over the lower half of the mass was extensively but superficially ulcerated. The tumour appeared to be solid. On passing a catheter about a pint of smoky urine was drawn off, but apparently no part of the bladder was involved in the swelling which was external to the vulva. The uterus could be felt in a position of retroversion and except as regarded its length it appeared to be of ordinary size. Examination of the abdomen after the passage of the catheter showed that the abdominal swelling had disappeared. The vulvar swelling was fomented and the ulceration diminished and in a few days it was found possible with a little trouble to return the swelling into the vagina; the discharge diminished and became inoffensive. To prepare the patient for operation vaginal douches of solution of perchloride of mercury (1 in 3000) were ordered, and on Jan. 26th, 1899, Dr. Lewers operated. The patient having been anæsthetised with the A.C.E. mixture was placed in the lithotomy position and the parts were thoroughly cleansed with a lotion of perchloride of mercury (1 in 2000). The tumour was seized with a volsella, and drawn down, and two semilunar incisions were made, one on each side of the attachment of the tumour, beginning immediately below the os uteri. When the incisions were deepened it was found that the tumour could be shelled out fairly easily, except at the highest point where it was continuous with the tissues of the cervix. A few bleeding points were ligatured. The edges of the stump were then brought together by deep sutures entered just at the edge of the surface and carried deeply to the surface of the stump; these were passed by a curved needle and were of thick chromicised catgut. The parts were again well douched and the vagina was packed with 2 per cent. iodoform gauze. On examination the tumour which had been removed was found to be a fibroid. The further history of the case was quite uneventful and on Feb. 6th Dr. Lewers removed the stitches. There was a slight rise of temperature to 101·6° on Feb. 9th, but it fell quickly, and on the 12th the patient was discharged well.

Remarks by Dr. LEWERS.—In Case 1 an interesting point was that the contents of the cyst instead of being transparent, as is usually the case, were thick and opaque, at first sight like the material found in dermoid cysts. The subsequent examination of the cyst wall and of the cyst contents showed, however, that it was not a dermoid. Cysts of the vagina, though not very rare in special practice, are really somewhat uncommon. The situation in which they are most frequently met with is at the lower part of the anterior vaginal wall. In the above case the cyst lay under the posterior vaginal wall and, speaking from memory, I can recall at least two others, one of the size of a small orange, that I have seen in that position. In dissecting them out I have noticed that there are generally one or two fairly large vessels near the highest point of attachment of the vagina. When this point is, as it may be, not far from the cervix I have found it more satisfactory to leave one or two pairs of small Wells's forceps on the vessels rather than to attempt to tie them. As a matter of diagnosis vaginal cysts are somewhat frequently mistaken for prolapse of the anterior or posterior vaginal wall respectively.

In Case 2 at first the diagnosis was primary fibroid tumour of the vaginal wall, and actually the fibroid, which

[1] Centralblatt für Gynäkologie, 1894, No. 44.

was somewhat pear-shaped, lay entirely beneath the posterior vaginal wall and had produced an extensive prolapse of the vagina with secondary descent of the uterus. At the operation, however, it was found to be continuous by a narrow neck with the substance of the cervix and a stump of cervical tissue had to be secured by deep sutures when this attachment had been cut through. It will be understood that the whole of the pear-shaped fibroid lay entirely under the posterior vaginal wall and it had to be dissected from beneath this. I think, therefore, that though practically and clinically a case of vaginal fibroid the tumour had originally sprung from the vaginal portion of the cervix and grown downwards beneath the vaginal wall. I had one case of primary fibroid tumour of the vagina which was shown before the Obstetrical Society of London in 1887. In that case the tumour lay under the anterior vaginal wall. I have never before seen what must, I suppose, be called a fibroid of the vaginal portion of the cervix lying entirely under the vaginal wall, as in the case here recorded.

ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

A CASE OF TUBERCULOUS DISEASE OF THE RIGHT KNEE AND RIGHT EPIDIDYMIS; DEATH UNDER CHLOROFORM.

(Under the care of Mr. WILLIAM BERRY.)

THE best treatment for cases of syncope arising during the administration of chloroform can hardly be said to be fully determined. Those measures which are most useful in arrest of respiration are not necessarily those likely to be of service in syncope. Professor Schäfer's suggestion of the intracardiac injection of extract of suprarenal capsule has not, we believe, yet been employed in the human body, chiefly because it is not likely to be at hand. From the physiological standpoint it appears probable that it may be useful in these cases. For the notes of the case we are indebted to Dr. George Mowat, junior house surgeon.

A man, aged 26 years, was admitted into the Royal Albert Edward Infirmary, Wigan, on May 1st, 1899, complaining of pain and swelling of the right knee and right epididymis, the former dating from an injury received three months previously to the knee. The patient was a pale, tuberculous-looking man, with no trace of disease about his heart or lungs. The temperature during the first two weeks after admission was only slightly raised, but later it assumed the usual tuberculous type, varying from 99° or 100° F. in the morning to 102° or 103° in the evening.

On June 8th he was operated on, excision of the testicle and erasion of the knee-joint being performed. Chloroform was administered by the "open" method until complete anæsthesia was produced, when ether was continued with. The operation on the knee having proved insufficient and tuberculous disease having developed also in both metatarsi it was decided to excise the knee-joint and scrape the metatarsi. This was accordingly done on July 9th, chloroform being again administered, followed by the A.C.E. mixture. On neither of these two occasions did any dangerous symptoms manifest themselves. Although the knee did well after this the temperature still remained high and the tuberculous process continued in the metatarsi, necessitating a further operation for which the patient was brought into the operating theatre on August 28th. Chloroform was administered as before by the open method and during the first stage the patient was nervous but took the anæsthetic quietly. The pulse was rapid and rather weak. The respirations were fairly regular. During the second stage the patient struggled a little, but did not hold his breath much; about three minutes from the commencement of giving the anæsthetic his struggles suddenly ceased, the conjunctivæ became insensitive, and the pupils dilated rapidly, whilst breathing continued, being slow and stertorous. The head was immediately lowered over the end of the table; two drachms of ether were injected hypodermically. The patient continued to breathe for a short time after his head was lowered, and on the cessation of breathing artificial respiration, with forward traction on the tongue, was commenced, and the method of inversion was carried out. The faradaic current was applied to the cardiac area and artificial respiration was persevered with for upwards of half an hour, although auscultation failed to detect any heart-beat 10 minutes after the appearance of dangerous symptoms. One drachm of chloroform had been administered.

Remarks by Dr. MOWAT.—The patient undoubtedly died from syncope, due partly, no doubt, to the fact that he had not been able for at least six weeks to sit up in bed or exert himself in any way, and the struggling during the excitement stage had thrown an unusual strain on the heart, which had probably been undergoing degenerative changes during the previous three months of suppuration and high temperature. Permission to hold a post-mortem examination was not obtained although the coroner held an inquest.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Congenital Subluxation of the Lens.—Sympathetic Ophthalmitis.—Sarcoma of the Conjunctival Sac.—Retinal Detachment (Sarcoma).—Embolism of the Central Artery of the Retina.—A Nasal Duct Dilator.—Effect of Injury on the Macular Area.—Injury to the Eyes from Explosion of a Glass Bottle.—Membrane on the Conjunctiva after Diphtheria.—Growth on the Eyelid.—Vascularity of the Lens Capsule.—Changes in the Macular Region.

A CLINICAL meeting of this society was held on Dec. 14th, Mr. A. QUARRY SILCOCK, the Vice-President, being in the chair.

Mr. GEORGE KEELING showed a case of Congenital Subluxation of the Lens with Secondary Luxation Forwards. When the patient was first seen six years ago both lenses were dislocated. In July last the patient was again seen, and then the left lens was found to be in the anterior chamber. Mr. Keeling attempted to pass a needle into it but owing to the toughness of the capsule this failed. He subsequently extracted it and with correction of + 12 dioptres and + 16 dioptres she now had vision of ⅔ and J. 1 in spite of the fact that before the extraction she was highly myopic, as she still is in the other eye.—Remarks were made by Mr. HOLMES SPICER and Mr. SILCOCK.

Dr. CECIL SHAW brought forward a case of Sympathetic Ophthalmitis commencing 40 days after enucleation of the injured eye. The patient was a healthy girl, aged 19 years, who was wounded in the left eye by a pair of scissors on May 24th, 1899. She was not seen by Dr. Shaw until June 20th. There was a wound at the upper corneal margin with the iris entangled. The eye was injected, painful, and blind with tension. On June 28th the eye was removed entire. This specimen with the sections was shown. The patient did perfectly well until August 14th when the eye became suddenly painful and injected. She was seen a week later suffering from severe irido-cyclitis and considerable failure of vision. In spite of all treatment the eye went from bad to worse, the pupil filled with lymph, and the vision was now perception of light only. Dr. Shaw proposed to try discission at a later period, as recommended by the late Mr. Critchett.—Mr. TREACHER COLLINS suggested that perhaps the second eye became affected independently of the first. He had under his care a man whose eye was removed for an injury in April last and who came back eight months later with the other eye inflamed. Under other conditions this would certainly have been termed sympathetic.—Mr. DEVEREUX MARSHALL thought that one of the most unusual features of the case was the severity of the disease, and he mentioned a case which had come under his observation in which sympathetic mischief had commenced about two weeks after the removal of an eye for injury. The disease was very mild and the eye quite recovered and he thought that this was the common experience in such cases.—Dr. SHAW, in reply to a question by Mr. R. W. DOYNE, said that the choroid had not been examined microscopically.

Mr. JOHN GRIFFITH showed a case of Sarcoma of the Upper Conjunctival *Cul-de-sac*. The patient was a woman, aged 45 years. The tumour was first noticed in December, 1898, though there had been brown pigmentation of the ocular conjunctiva for 18 months previously. The growth was freely excised but a recurrence had recently appeared. Microscopically the growth was seen to be a mixed cell sarcoma. Mr. Griffith wished to know the opinion of members as to

treatment—whether it would be sufficient to remove the recurrence or whether it would be better to remove the whole contents of the orbit.—Mr. DEVEREUX MARSHALL looked upon the pigmentation of the conjunctiva as indicating disease and from his experience of one case he had seen he strongly advised the more radical operation as he thought that anything short of this would not ensure the removal of the whole of the disease.

Mr. JOHN GRIFFITH also showed the Macroscopic and Microscopic Specimens of Mr. Work Dodd's case of Retinal Detachment, which was shown as a clinical case at the last meeting of the society. It proved to be a sarcoma.

Mr. A. H. THOMPSON exhibited a case of Embolism of the Central Artery of the Retina in an anæmic girl, aged 16 years. She had acute rheumatism two years ago which followed scarlet fever. The points of interest lay in the fact that the papillo-macular triangle had escaped and also that there was some pulsation of the central artery.

Mr. C. D. MAYNARD showed a Nasal Duct Dilator which differed from the ordinary probe in the fact that it could be introduced and dilated when in the duct.

Mr. G. BROOKSBANK JAMES exhibited a case showing Changes in the Macular Area consequent upon injury. The patient received a blow on the eye three years ago with a tennis ball. Since the accident the vision had been defective. Several white spots could be seen about the macula and an area of pigmentation existed below the disc.—Mr. ADAMS FROST and Mr. G. HARTRIDGE had both seen similar cases and these were caused by injury such as in the present case.

The CHAIRMAN and Mr. C. D. MAYNARD showed a patient who had Both Eyes Wounded by the Explosion of a Glass Bottle. The right had an extensive wound of the sclerotic on the inner side from which vitreous was escaping. The left had a wound through the corneo-scleral junction with the iris and ciliary body prolapsed. Mr. Silcock sutured the sclera with fine silk, endeavouring not to penetrate the entire thickness of the sclera. The patient recovered vision of $\frac{6}{12}$ in the right eye and $\frac{6}{9}$ in the left.

Mr. A. Q. SILCOCK and Mr. MAYNARD also read notes of a case of Long Persistence of Membrane on the Conjunctiva after Diphtheritic Ophthalmia. The patient, a child, had been under the care of Mr. W. H. D. Mence of St. Ives, Hunts. The eye was destroyed and had subsequently been removed, and in spite of this the membrane still persisted after several months of treatment and contained an attenuated form of diphtheria bacillus.—Mr. W. T. LISTER asked if antitoxin had been used and in reply Mr. SILCOCK stated that it had not.

Mr. VERNON CARGILL showed a patient with a Growth on the Right Upper Lid occurring in the site of an old scar where a Meibomian tumour had been removed six years previously. About three months ago the eye became irritable and on the inner surface of the upper lid a cauliflower-like growth with a broad base made its appearance. There were no enlarged glands. A portion was removed for microscopic examination. Clinically, it was thought to be an epithelioma, and Mr. J. H. Griffith, who had seen the sections, was also of that opinion.

Dr. W. A. BRAILEY and Mr. ORMOND showed a case of Vascularity of the Lens Capsule, probably Congenital. There was also a congenital cataract and a persistent pupillary membrane.

Mr. STANFORD MORTON had a case showing Changes in the Macular Region which in his absence was shown by Dr. G. W. THOMPSON.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Beri-beri.—Sarcoma of Lip.

A MEETING of this section was held on Dec. 1st, Dr. A. C. O'SULLIVAN, the President, being in the chair.

Dr. PERCY GERRARD's paper on Recent Investigations in the Bacteriology of Beri-beri was communicated by Dr. A. R. PARSONS.

Dr. A. C. O'SULLIVAN said that he did not see why if an attack of erysipelas would cure sarcoma the streptococcus would not cure beri-beri without a specific action.

Dr. J. A. SCOTT said that during the epidemic of 1894 in the Richmond Asylum, Dublin, he made, with Dr. D. F. Rambaut, some investigations into the condition of the blood in this disease. A number of attempted cultures remained absolutely sterile. In other cases, however, colonies grew and these were subsequently separated. In the memorandum which he had made then he found notes of the bacillus subtilis, the bacillus roseus, the penicillium glaucum, and the like, which obviously indicated air contamination, but there were also colonies of cocci formed which had a yellow colour when grown on any medium. Some of these suggested to him the sarcina lutea, but other cultures he believed were not those of ordinary air cocci. In his notes he had the words "diplococcus" and "(?) tetrad," so that the general arrangement of these cocci occasionally suggested to him some form of tetracoccus. Some of the patients whom he observed were always sure finds as regards cultures, whereas other cases equally as bad were always sterile.

Professor E. J. MCWEENEY said that there was a paucity of detail regarding the cultural characteristics of the micro-organisms found. For instance, there were no details about the temperature at which they would grow, whether they liquefy gelatin, about their growth on media containing glucose, their fermentative power, their coagulation of milk—particulars which were of importance in determining the species of a micro-organism. With regard to the improvement of the patients under anti-streptococcic serum being coördinated with a growth of a yellow colour obtained from the blood, he thought there could be no connexion, because the streptococcus did not produce a yellow colour. The injection of the serum, however, might have produced a general phagocytosis of a non-specific character, but that state of affairs could not denote any connexion between streptococci and beri-beri. There was such an extreme difficulty in sterilising the skin that in his own work he would pay no attention to a result got from a drop of blood that had been in contact with the skin. The method which he employed successfully was to extract several cubic centimetres of blood from one of the veins in the arm with a sterilised hypodermic or antitoxin syringe. So few were the micro-organisms in even violent septicæmia that unless they extracted a good deal of blood they would not find any micro-organisms at all. It was with these precautions that he had succeeded in getting the diplococcus pneumoniæ in a case of ulcerative endocarditis coming on after acute pneumonia.

Mr. CONOLLY NORMAN, referring to the micro-organisms described by Pekelharing and Winckler, said that they found them in every patient's blood; but they also found them in the blood of persons in Atjeh who had not beri-beri and similar cocci were also found in the air of that place. Mr. Norman showed illustrations of cocci found by other observers which were very dissimilar from those of Pekelharing, but he (Mr. Norman) pointed out that these cocci were obtained from the dead body and he therefore considered them to be of little value. Pekelharing's and Winckler's results were disputed by other investigators, amongst whom was Scheube. Glogner found parasites in the spleen resembling those of malaria, and on that fact he had founded his theory, which had got a few adherents, that beri-beri was identical with malaria. At Tuscaloosa, in the State of Alabama, cocci were found in the blood of beri-beri patients, but they were not described in detail. One of the peculiarities of the disease which Dr. Gerrard had remarked, and which he also had noticed, was that patients frequently got relapses and often died rather suddenly after apparently getting quite well. In a recent monograph on the subject Grimm had laid it down that beri-beri always commenced with slight initial fever.

Dr. J. KNOTT pointed out that Dr. Gerrard's cases commenced with fever and diarrhœa and that one of his patients was engaged in mining operations. He remembered reading some years ago the theory that beri-beri was produced by the same parasite as produced Egyptian chlorosis.

Dr. A. R. PARSONS, in reply, said that most of the points which had been raised had been already touched upon by Dr. Gerrard in his paper, which, however, he had not had time to read in full. Bearing in mind Dr. Scott's notes, it was interesting to observe that several of Dr. Gerrard's cover-glass preparations had shown distinctly diplococci, and in many cases tetracocci. Most of Dr. Gerrard's patients were miners and this seemed to point to the poison being in the earth. In a few cases the ankylostomum duodenale was found.

Dr. R. CHARLES B. MAUNSELL read notes of a case of a married woman, aged 32 years, from whose lower lip he had

removed a Small Prominent Tumour. She was suffering at the same time from well-marked chloasma uterinum. On examination the tumour was found to be a spindle-celled sarcoma. Dr. Maunsell drew attention to the rarity of sarcoma of the lip and stated that so far he could find no reference to it in English works, but he had found a short notice of two cases by Vidal and Luttegast in "Duplay and Reclus' Surgery."

Professor MCWEENEY said that about a week ago a specimen of about the size of a pea was given to him in hospital from the lower lip of a child, aged 10 years. On section it proved to be a mixture of sarcomatous tissue with dilated lymphatics and a considerable number of minute newly-formed capillaries. He reported it as being a lymphangio-sarcoma.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of the above society was held on Dec. 7th, Dr. Frederic Bagshawe (St. Leonards) being in the chair.—Dr. Cecil Latter (Folkestone) read a paper entitled, "The Duties of Medical Men in the Public Life of Health Resorts." He began by stating that he had chosen the subject because he had recently been elected a member of the Folkestone Town Council. He analysed the various considerations which influenced medical men for and against their entry into municipal affairs. The most powerful deterrent was the fear that the publicity entailed would be construed into a desire for self-advertisement. This objection would be removed if the medical councillor were the delegate and nominee of the other practitioners in the place. Dr. Latter strongly advocated this as the only satisfactory basis of candidature for a medical man. He held that the existence of a medical officer of health in a district did not render unnecessary a medical man on the council; on the contrary, the medical man could give most valuable aid to his colleagues by virtue of his more intimate association with his fellow councillors. The time consumed by public business was no doubt a serious matter, but many prominent practitioners had been able to discharge their duties as mayors or councillors without neglecting a large practice. Dr. Latter considered that no health resort should be without a medical man on its council and that if possible that gentleman should be the delegate of his brethren.—Dr. Symes Thompson pointed out that a medical man, however engrossing his occupation was not exonerated from the duties of citizenship, and that whether in the field of political, religious, or municipal life, he had a part to play in which his scientific training and broad insight made his opinion and influence of special value to the community in which he lived.—Dr. Bagshawe considered that medical men should, when needed, take up responsibilities of citizenship by becoming members of the town council, and that they should not be deterred by the reasons alluded to by Dr. Latter. A medical practitioner's knowledge in sanitary matters would specially fit him to serve on the sanitary committee, where he could forward the work of a zealous medical officer of health, and, further, he could render help in securing and maintaining a good water-supply. The Roads Committee as well as the parks, gardens, and general means of recreation should occupy his attention. He would be in touch with both householders and lodging-house keepers, and could speak as to their needs and as to their powers of bearing taxation, and would know when to uphold economy of administration. Perhaps he might leave to others the duties involving on the Watch Committee. A medical man was especially called upon to enter upon public life if he did so with the active concurrence of his professional brethren.—Dr. E. A. Snape thought a great deal of ignorance existed amongst medical men as to the important duties discharged by municipal bodies and he was strongly in favour of practitioners taking a more active and personal part in local affairs.—Dr. Leonard Williams and Dr. Humphreys made remarks.—Dr. Latter, in his reply, pointed out that the theoretical advisability of making the practitioner the delegate of his professional colleagues had not been seriously attacked by the speakers. He hoped that the *esprit de corps* which united the medical men at Folkestone would in the future be found to exist in other places. He was pleased to find that his paper had introduced so interesting a discussion.—Dr. Leon (Sidmouth) then read a paper on Sidmouth as a Winter Health Resort. Sidmouth was deserving of more notice as a health resort in the winter months for the following reasons: 1. Because owing to its situation it was protected from all winds except those from the south, south-east, and south-west. 2. Its mild and equable climate. Statistics given proved that the amount of winter sunshine was many hours above the south coast average. The average rainfall was 33·68 inches. The mean winter temperature was two degrees higher than that of London and one degree higher than that of Bournemouth. The percentage of humidity was 83 per cent. 3. The possession of a very complete set of baths with skilled attendants. These baths were fitted up for Nauheim baths, also hot and cold, fresh and salt water, immersion, douche, Aix massage, and other baths. 4. It was only four and a half hours from London. The cases which did best in this equable but somewhat humid climate were (1) cases for Nauheim treatment, and those which derived most benefit from this treatment were cases of early valvular disease after acute rheumatism, cases of heart neuritis, cases of heart dilatation (not fatty), and cases of combined cardiac disease with renal failure; (2) chest diseases, cases of early phthisis and asthmatic cases; (3) renal cases; (4) nervous diseases of insomnia and neurasthenia; and (5) cases of convalescence from various disorders. Cases which were not suited to the climate were: (1) cases of simple anæmia; (2) cases of hepatic congestion; and (3) cases with a tendency to hæmorrhage—e.g., menorrhagia.—Dr. A. P. Luff said that he could bear testimony to the soft air of Sidmouth, as well as to the excellence of its baths. On account of the high relative humidity of the air he doubted whether the locality was suitable for cases of articular gout and rheumatism.—Dr. Symes Thompson and Dr. Leonard Williams also discussed the paper.—In his reply Dr. Leon agreed with Dr. Williams that cases of Bright's disease in the Sidmouth valley were rare amongst the residents. He argued that the humid climate tended to induce free action of the skin and so was indicated in conditions of advanced gouty kidney disease; chronic gouty arthritic conditions were well treated by local douches.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a special general meeting of this society held on Dec. 5th, Mr. W. H. Horrocks, jun., the President, being in the chair, there was a discussion on Tuberculosis in its Relation to Public Health.—Dr. R. H. Crowley read a paper on the Sanatorium Treatment of Phthisis. He laid stress on treatment in a sanatorium as distinguished from the "fresh-air" and other modes of treatment, in that it was a mental as well as a physical remedy, and he urged the importance of strict discipline in regulating and controlling every detail of the patient's life. A special climate was not necessary. Very satisfactory sanatoria could be made in most parts of the kingdom provided that the air was pure and free from soot, the soil was well drained, the building sheltered from the prevailing winds, and that there was a fair amount of sunshine. All cases were suitable for treatment, those in the earlier stages naturally yielding the most satisfactory results. A large proportion of cases were curable for the time being, the cure only being maintained if suitable habits of life were observed on the patients returning home. Patients must be educated into a knowledge of healthy conditions of life. The duration of the treatment in the sanatorium would vary with the nature of the case. Finally, it was urged that the coöperation of the whole medical profession must be secured, in order that the sanatorium treatment should be a success.—Dr. Arnold Evans followed with an address on Tuberculosis, its Prevalence and Prevention. He said that the bacillus tuberculosis was essential to the definition of the disease. All warm-blooded animals were susceptible to tuberculous disease, especially under conditions of domestication or confinement. Races of men living in the open air were practically exempt, but as soon as individuals came to live in permanent houses they became susceptible. With regard to animals it should be comparatively easy to keep the disease in check by the destruction of infective material and removing the possible sources of infection by diseased animals. He remarked that 11 per cent. of all deaths in the last five years had been from tuberculosis, while no other single disease showed more than 3·4 per cent. of the total deaths. Charts were distributed showing that from 1838 to 1894 there had been a steady decline in the phthisis death-rate, but that there had been no such diminution in the death-rate from other tuberculous diseases. This decline of the death-rate was attributed to

the amelioration of insanitary conditions of life and to the recognition of tuberculosis as an infective disease. Direct hereditary transmission was a possible source of the disease, but not a frequent one. Dried discharges and secretions constituted the chief cause of infection, while the consumption of tuberculous milk and meat was another. In order to avoid these channels of infection it was recommended that patients suffering from phthisis should be isolated in sanatoria and their houses and furniture should be disinfected; that sputum and other discharges should not be allowed to become dry and so get diffused in the atmosphere; that all dairies and cowsheds should be registered; that cows with indurated udders should be notified to the sanitary authority and their milk not mixed with the milk of healthy cows; that the carcasses of slaughtered animals should be inspected by a competent person; and that till preventive measures were taken all milk should be sterilised.—Dr. J. Metcalfe urged the importance of early diagnosis in order that treatment might be satisfactory.—Dr. H. C. Major raised the question of the notification of phthisis. He thought that public opinion was not yet ripe for compulsory notification, but suggested that some system of voluntary notification should be adopted.—Dr. J. H. Bell said that the introduction of sanatoria was sure to be associated with a great deal of quackery. He threw doubt on the accuracy of statistics from institutions which were conducted for the profit of the superintendent. He advocated the compulsory notification of phthisis.—Dr. A. C. F. Rabagliati advocated the prevention of phthisis by inculcating into the minds of the public the importance of fresh air, exercise, and diet. He thought that public bodies might do much good by insisting that the living rooms of all new houses should have an adequate cubic space.—Dr. F. W. Eurich alluded to the prevalence of porcine tuberculosis and remarked that the liver and tonsils were the organs chiefly affected.—Dr. D. Goyder, Dr. S. Johnston, Dr. S. Lodge, and the President made further remarks and Dr. Crowley and Dr. Evans replied.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Dr. H. Brunton Angus, the President, being in the chair.—The President showed a boy, aged 15 years, who whilst following his occupation as a pit-lad had his Right Foot Crushed by an Overturned Waggon. This occurred on Jan. 10th, 1899, and he was immediately taken to the Royal Infirmary. On admission it was found that there was a large lacerated wound over the inner side of the ankle, through which protruded the lower end of the tibia; the tip of the internal malleolus was detached, all the ligaments of the joint were severed, and the foot was dislocated outwards. The wound was begrimed with coal-dust. The vessels and nerves were intact. The dislocation was reduced and the parts were thoroughly cleaned under anæsthesia, the wound being left open and a drain employed. The wound healed without suppuration in the joint. 13 weeks after the accident the patient walked out of the infirmary with the aid of sticks which he was able to discard in two weeks' time. He was now back to work and the limb was to all intents and purposes as useful as its fellow, the movements in the joint being perfect.—Dr. F. C. Coley and Dr. T. Beattie discussed the frequent occurrence of tetanus after pit accidents.—Dr. Coley read notes on a case of Purpura Hæmorrhagica which he illustrated by means of excellent photographs. His patient was a girl, aged seven years, who was admitted to the Fleming Memorial Hospital on Nov. 10th, 1899, in a collapsed condition. The illness dated from four days previously. Diffuse subcutaneous and subconjunctival hæmorrhages were visible; there were also epistaxis, hæmatemesis, hæmaturia, and melæna. The gums were spongy and the teeth were loose. No satisfactory cause could be assigned to the condition. The spleen was not enlarged. Treatment was by means of five-minim doses of turpentine given by the mouth every four hours and by subcutaneous infusion of saline solution in the axilla. The patient made an uninterrupted recovery and was now quite well.—Mr. T. G. Ouston showed a female infant, seven weeks old, with well-marked Double Inguinal Enterocele.—Mr. Ouston also showed a man, aged 75 years, with Malignant Glands in the Right Side of the Neck in the Region of the Thyroid Cartilage. No primary growth could be found and he suggested its origin in the epithelium of one of the branchial clefts.—On the invitation of the society Mr. T. Maltby Clague proceeded to read a paper entitled Prescribing from a Pharmacist's Standpoint. He commenced by an allusion to the mutual obligations of physician and pharmacist and the benefit accruing to the patient from their due recognition. Mr. Clague then proceeded to discuss many incompatibilities prescribed in every-day practice and showed several interesting specimens in illustration of his subject. His concluding remarks may with advantage be quoted in full: "I have ever regarded it as the duty of the pharmacist in cases of doubt to consult the prescriber, and in doing so to make any suggestion which will help to carry out the purpose of the prescriber. This should be done without arousing any doubt in the mind of the patient or his friends. In carrying out this I have always had the most courteous reception and a ready acquiescence in usable suggestions. My presence here this evening is a proof that in your profession you are ready to acknowledge and to utilise for the public good the knowledge which the pharmacist gains in his calling which, though partly trade, has yet much in it which is of a really professional nature."—The President showed a specimen of Ruptured Ectopic Gestation which he had successfully removed by operation three weeks previously. Menstruation ceased in August and one month later the patient was seized with abdominal pain, metrorrhagia, and vomiting. This continued on and off till Nov. 14th, when an exacerbation of symptoms led to an examination by Mr. W. M. Jennings of Jarrow, who sent her to the Royal Infirmary, Newcastle, for immediate operation. A mass was found in the region of the left broad ligament and from it the placenta and fœtus shown were removed. The patient made a good recovery and was now quite well. Hæmorrhage from the placental site was very troublesome after the operation and Dr. Beattie suggested that the placenta might with advantage have been left *in situ*.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 15th, Dr. Franklin Parsons, the President, being in the chair.—A paper by Dr. Armand Ruffer, President of the International Sanitary, Maritime, and Quarantine Council, on Measures taken at Tor and Suez against Ships coming from the Red Sea and the Far East was read by the Secretary, in the unavoidable absence of the author, and will be found at page 1801 of the present issue of THE LANCET.—Dr. Arthur Shadwell read a paper on the Behaviour of Plague at Oporto. He commenced by referring sympathetically to the death last month of the distinguished Portuguese bacteriologist, Dr. Pestana, from plague contracted in Oporto, and quoted the utterance attributed to him on his deathbed: "We know nothing about plague." He was afraid that it was true that very little was known about plague. He considered it a particularly dark and mysterious disorder, the obscurity of which was not materially lightened by labeling it a filth disease or by uttering the word "rats" and he thought the facts of the Oporto outbreak bore out that opinion. After describing the town of Oporto and giving some vital statistics and other details, he went on to discuss the origin of the outbreak, illustrating his remarks with a spot map. The earliest cases that had been traced occurred at the beginning of June last. There was no evidence to show that the disease had existed previously for an indefinite time, as alleged by some persons; on the contrary, he thought that Dr. Jorge, to whose knowledge and devotions he paid a high tribute, had fixed the commencement with approximate accuracy. The earliest victims were Spanish dock labourers living in a narrow and filthy street near the river-side. The symptoms were fever, prostration, delirium, and bubonic swellings in the axilla or groin. The first case of all was that of a man who was employed in a salt fish warehouse. He was said to have been engaged in unloading a vessel with grain from India but on investigation the story melted away. He was not so employed; there was no grain from India and no ship at all from any infected port. The trade of Oporto was with London, Hamburg, Rotterdam, and Havre, and goods from any infected place could not be shipped there until they had lain for three months in some clean, intermediate port. The difficulty with regard to importation, therefore, was that the infection should have passed over so many ports in constant and direct communication with the Eastern plague centres, or very much nearer to them than Oporto, and should have picked out a small port having no connexion with them at all. He agreed with Dr. Jorge in calling it a "flagrant etiological absurdity."

Passing on to the spread of the disease he traced the connexion between the earliest cases and showed that the infection was conveyed by personal contact. In one interesting case a father, sleeping in a plague-infected house during the week but going home to a suburb on Sunday, carried the infection home and his two little girls caught it, though he had no illness himself. The first score or so of cases were of an epidemic character, but after this a change set in and cases began to appear scattered about in an irregular fashion and at considerable distances. There was very little evidence suggesting dissemination by animals. The most striking fact was the comparative immunity during this phase of the outbreak of the principal slum area of the town, which was close to and connected with the original seat, and in which poverty, overcrowding, and dirt chiefly abounded. He thought the facts were very puzzling and the more closely they were studied the less intelligible they became. The total number of cases up to the end of November was 277 with 97 deaths. The monthly distribution was 17 in June, 10 in July, 38 in August, 57 in September, 95 in October, and 62 in November. This indicated a tendency to decline which was further maintained at the present time.—Dr. J. Spencer Low, late medical officer on plague duty in India, read a paper on some Preventive Measures adopted in the Presidency of Madras during the late Epidemic Prevalence of Plague in India.—The reading of the papers was followed by a discussion in which Dr. Bruce Low, Dr. A. H. W. Clemow, Dr. W. J. Simpson, Dr. H. T. Bulstrode, and the President took part.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held at Owens College on Dec. 13th, Mr. W. Thorburn, the President, being in the chair.—Mr. G. A. Wright and Dr. D. S. Wylie reported three cases of Tuberculosis of Hernial Sacs occurring in Children, in two of which a radical operation had been done with good result. In the third case, however, the patient died in hospital from tuberculous meningitis. In the two cases operated upon the lesion was apparently limited to the hernial sac, there being no signs present of abdominal or other tuberculosis.—Dr. A. W. Lea exhibited specimens from an unusual Tumour of the Face in a young child.—Dr. T. A. Rothwell showed and described a number of specimens of Experimental Aspergillosis.—Dr. W. Milligan showed a specimen of Sarcomatous Disease of the Middle Ear occurring in a child aged two and a half years. The first symptom noticed in the case was the occurrence of slight facial paralysis. This was followed two days afterwards by a sero-sanguineous discharge from the middle ear which rapidly became purulent and very fœtid. A fortnight after the first appearance of the discharge the external meatus was found to be filled with a fleshy-looking growth. When brought to the hospital six weeks after the onset of the symptoms the child was found to be emaciated and feverish. A large peri-auricular abscess was present and the external meatus was entirely blocked by a greyish-looking and vascular growth. The history, the emaciation, and the appearance of the growth and its vascularity suggested sarcoma. A portion of the growth was removed for microscopic examination and was found to present the characters of a myxo-sarcoma. No operation was performed, the case not being considered suitable for any active interference. Two months afterwards the child died. A post-mortem examination showed a large sarcomatous growth springing from the periosteum of the middle ear and perforating the tegmen tympani, growing inwards within the cranial cavity and pushing the dura mater before it. Reference was made to the rarity of sarcomatous disease of the middle ear and to two other cases which Dr. Milligan had had the opportunity of observing in his practice.—Dr. Eugene S. Yonge showed an Adeno-cystoma of the Neck probably originating in an accessory thyroid gland. The growth, which was congenital, was removed from a young man, aged 19 years. It occurred as a small encapsuled tumour of about the size of a walnut, situated in the middle line of the neck immediately below the hyoid bone; a fibrous cord led from the upper extremity of the tumour to that structure. Microscopically the specimen presented a strong resemblance to thyroid tissue. Dr. Yonge mentioned the usual seats of accessory thyroids, and referred to the possibility of remnants of the gland being left anywhere along the tract of the thyro-glossal duct and undergoing adenomatous or cystic change. The specimen shown appeared to be an example of a median accessory thyroid gland which had undergone some such metamorphosis.—Mr. David Headridge showed models of the Mouth of a Young Man, aged 21 years, in which on the right side there was a space between the teeth of half an inch extending from the canine to the distal edge of the second molars, neither the upper nor the lower teeth reaching their normal occlusal line and yet without any apparent cause, the patient having enjoyed exceptionally good health, the only medical trouble having been the occurrence of some inflammatory polypi in the middle ear on the same side for which there had been an operation. Both of the upper second temporary molars were *in situ*, the roots alone remaining of that on the right side. On the left side the teeth had their normal occlusion. The bones of the face were otherwise fully developed and there was no history of facial paralysis or of any of the exanthematous fevers.

BIRKENHEAD MEDICAL SOCIETY.—A meeting of this society was held on Dec. 15th, Mr. H. Nazeby Harrington, the President, being in the chair.—Mr. G. S. Stansfield read notes and showed specimens of (1) Double Aneurysm of the Aortic Arch; (2) Glioma; and (3) Pleura and Heart with Extensive Malignant Disease.—Dr. H. Dixon showed a specimen of a Fœtus.—Dr. Herbert Dixon read a paper on Music and Medicine considered from a Physiological, Pathological, and Therapeutical Standpoint. Handel and Berlioz were referred to as the chief musicians who had any relationship with medicine. In considering the physiology of music Dr. Dixon mentioned experiments of his own as having similar results to those of Dogiel on man and animals testing the effect of music in the healthy state—viz., the rise and fall of blood-pressure, increased cardiac action, variations in respiration, &c. He alluded to the Grecian division of music into four forms according to the effect of different styles on the human body through the emotions—namely, Phrygian, Lydian, Æolian, and Doric. He agreed with Dr. Davison that the human organism tended to vibrate synchronously with music, but showed how different individuals would react to different tones and variations—for example, the lulling effects of quiet rhythmical tones of slight variations, as in the case of a mother singing to her wakeful infant; the exciting effects causing quickened pulse and respiration, as exemplified in the "Patriots Marching from Marseilles to Paris," "The Soldiers of the Queen," &c.; the irritating effects of such phrases as the repetition of "Ta-ra-ra-boom-de-ay," the irritation being caused, according to the late Professor Rutherford, by summation of stimuli. Other physiological effects noticed were perspiration, the desire to micturate, and lacrymation, while laughter was very rare. Under the pathology of music was mentioned the over-practice of the present-day piano enthusiast and the state of neurasthenia resulting therefrom, chronic laryngitis of clergymen and singers, emphysema of the lungs in players of wind instruments, the hysterical effects of music in the tarantism which broke out in Italy, &c. He next alluded to the different tones and variations elicited from the body in health and disease by percussion and auscultation, stating that in a case of resolving croupous pneumonia there might be a difference from one semitone to four full tones in percussion. Under the heading of therapeutics of music Dr. Dixon briefly sketched the results obtained from the time of Pythagoras, mentioning various affections in which music suitably applied had produced beneficial results. In a case in his own experience a child of four years had been cured of night terrors by the singing of nursery hymns. He drew attention to Dr. Hunter's successes in Helensburgh in which he had noted diminution and cessation of pain and reduction of temperature, to the Rev. Canon Harford's results in the London Hospital, &c. In conclusion, he divided the patients for treatment into two classes: (1) circulation slow, brain ill-nourished, low state of health, as in melancholia, &c., in which cases the music administered should be bright and cheerful; and (2) blood-pressure high, pulse rapid, delirium as in fevers, &c., where music of a soft and soothing character should be employed.—Dr. Stansfield-Pinkerton and the President joined in a discussion and Dr. Dixon replied.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 15th, Mr. J. Lionel Stretton, the President, being in the chair.—The President showed a girl, aged 16 years, who four years previously had fallen on the edge of a desk and sustained a wound over the right eye. At the time of the accident she was concussed and had ever since been subject to severe headaches and

"turns" in which she partialy lost consciousness. There was a scar visible over the right eye. Mr. Stretton removed a disc of bone one and a half inches above the scar; the dura mater was found to be adherent to the bone about half an inch outside the scar and a sharp projection of bone was found pointing inwards and pressing on the dura mater. This was removed with a raspatory; the patient made a good recovery and had had no return of the symptoms.—The President also showed a boy upon whom he had performed the operation for the Radical Cure of Hernia a month previously. There had been no return of the hernia and no truss was worn.—Dr. O. C. P. Evans showed a man whom he had treated for Fractured Patella 18 months previously by drawing the fragments together with thick silver wire. The wire had been a constant source of irritation and had recently been removed. There was, as shown by a skiagram, firm fibrous union.—Mr. J. P. Race showed a girl, aged 18 years, who was admitted to the infirmary with the Left Thigh Flexed and Painful. There was no tuberculous history and no evidence of hip disease. The thigh was straightened by means of an extension. A few days later great pain was complained of in the left lumbar region and this was followed by the appearance of a brawny swelling accompanied with great tenderness over the second lumbar vertebra. An incision was made in the swelling and an abscess cavity was found, but no dead or carious bone could be detected. The patient did well and had gained nearly a stone in weight. The cavity closed with the exception of a discharging sinus which still remained.—A discussion took place on Medical Organisation, the discussion being opened by the President.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A meeting of this society was held on Dec. 14th at the Royal Infirmary, Newcastle-on-Tyne, Dr. W. Robinson, the President, being in the chair.—Dr. J. Limont showed the following examples of skin disease: 1. Three cases of Lichen exhibiting various stages of the disease. The diagnosis and treatment were discussed. 2. An extraordinary Bromide Rash in a man who had been taking drachm doses of the mixed bromides every day. The case showed bullæ, ulcers, and marked pigmentation. Preventive treatment by arsenic and intestinal antiseptics in the form of salol, β naphthol, and salicylates was considered. 3. A boy showing a Patch of Morphœa over the Left Side of the Chest, also a long band from the anterior superior iliac spine down the front of the thigh and inner side of the leg and foot to the big toe, producing a deformity simulating talipes varus. 4. Two cases of Lupus Erythematosus, the first showing typical raised patches in an exaggerated form, the second doubtful and probably part of a seborrhœic dermatitis.—Dr. W. J. Penfold read a paper on Mitral and Tricuspid Incompetence, based upon recent observations made on a series of hearts from patients dying in the Northumberland County Asylum. For testing the orifices post mortem he had used a nozzle introduced through the aorta and pulmonary artery respectively and connected by hose to an ordinary tap, the perfect or imperfect closure of the auriculo-ventricular valves being viewed through the opened auricles.—Dr. A. S. Percival read a paper on the Light Sense and Colour Sense. He divided visual acuity into (1) form sense; (2) light sense; and (3) colour sense. He discussed the value of light difference and light minimum and of accurately estimating and recording colour sense. For this purpose he exhibited and explained the use of Chibret's photoptometer and chromatoptometer and the pocket colour test devised by himself.—Dr. I. G. Modlin showed an Anencephalous Fœtus in illustration of his remarks on Spina Bifida on account of its exhibiting absence of the upper cervical laminæ.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 6th, Dr. H. Michie, the President, being in the chair.—Mr. R. C. Chicken showed (1) a patient after Ligature of the Common Carotid; and (2) a patient after Ligature of the Femoral Artery in Scarpa's Triangle for Popliteal Aneurysm, the sac of the aneurysm being dissected out. Subsequently some paralysis developed in the leg owing to the peroneal nerve being involved in subcutaneous scar tissue. A dissection of the nerve was made and it was freed from the scar tissue which had abolished its conductivity, the patient recovering entirely from the paralysis after this with the aid of massage and electricity.—Mr. A. R. Anderson read a paper on the Treatment of Tetanus with Antitoxin. The paper, which was based on three cases occurring in Mr. Anderson's own practice, gave a survey of the present attitude of the profession in respect of this treatment.—Dr. J. S. Bolton read a paper on the Treatment of Scarlet Fever without Isolation. Anointing the patient all over with oil of eucalyptus was advocated. In this way it was stated that the danger of infection being conveyed was reduced to a minimum and the duration of the peeling process much shortened.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held on Dec. 14th.—Dr. Grant Andrew showed:—(1) A patient from whom the Entire Penis, Scrotum, and Testicles had been removed for Epithelioma of the Penis; (2) a patient from whom a Papilloma had been Removed from the Tongue, the specimen showing features suggesting carcinomatous change; and (3) the specimen, with a cast, of a large Fibrous Epulis removed from the Upper Jaw. Dr. Andrew gave a full account of the course of the disease in each case and described the operations for the removal of the growths.—Dr. D. Macgilvray, who referred the case of papilloma to Dr. Andrew for treatment, remarked that he had been consulted, not on account of the condition of the tongue, but on account of a purpuric eruption and œdema of the legs.—Dr. John Stewart and Dr. T. W. Jenkins made some remarks.—Dr. J. Rowan gave a demonstration of a case of Traumatic Aniridia.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held on Dec. 14th, Mr. Luther Cooke, the President, being in the chair.—Dr. Barr, physician to the Royal Infirmary, Liverpool, read a paper on the Treatment of Typhoid Fever which was attentively listened to by those present as the paper was an interesting and practical one.—A discussion followed, the President, Mr. Graham, Dr. Rees, Dr. Blair, and the honorary secretary taking part in it.—A cordial vote of thanks was accorded to Dr. Barr and he afterwards briefly replied.

Reviews and Notices of Books.

A Manual of Surgical Treatment. By W. WATSON CHEYNE M.B.Edin., F.R.C.S.Eng., F.R.S., Professor of Surgery in King's College, London, Surgeon to King's College Hospital and the Children's Hospital, Paddington Green; and F. F. BURGHARD, M.D., M.S. Lond., F.R.C.S. Eng., Teacher of Practical Surgery in King's College, London, Surgeon to King's College Hospital and the Children's Hospital, Paddington Green. In Six Parts. Part II. London and Bombay: Longmans, Green, and Co. 1899. Pp. 382. 8vo. Price 10*s.* 6*d.*

THE favourable opinion which we were able to express on the first volume of this manual is equally deserved by this the second instalment. It commences with an account of the Surgery of Deformities, and as 140 pages are devoted to this subject there is ample room for a satisfactory exposition of the treatment. In describing the treatment of superfluous digits the authors state that the additional finger is very unsightly; this is true of nearly all cases, but in those rare forms in which there is an additional metacarpal bone to support the extra finger the superfluous finger is very little noticeable; but a quite sufficient reason for removing an extra finger is to be found in the impossibility of gloves being worn while the extra finger remains. A good account is given of the Treatment of Hallux Valgus, but it is an error to describe the great toe as "abducted" in this condition; the toe is strongly *adducted*, for it must be remembered that in the foot all movements of the toes are described as occurring in relation to the middle line of the second toe and the muscles are named on this principle. It is only a little slip, but it might cause much confusion to a student. "Club-foot" occupies some 50 pages and the several procedures are carefully described, but we are inclined to think that the value of Phelps's operation is a little under-estimated, especially if the gap on the inner side of the foot be filled in with the redundant skin from the outer side of the foot, as described by Kellock; the authors do, indeed, say that skin-grafting may be used to cover in the wound, but no indication is given of the method which we

have mentioned. Perhaps the best portion of this section on deformities is that which deals with Coxa Vara.

We were a little surprised to see the statement that impetigo occurs "in connexion with the hair follicles," and it is surely a pity to use the term "scrofulous gummata" for cutaneous or subcutaneous tuberculous nodules. It is quite time that the word "scrofula" was given up. If it has any definite meaning that meaning is much more accurately expressed by "tuberculous," and if it has not a definite meaning it is ambiguous, and it is unfortunately only too often employed to hide a difficulty in diagnosis. In the description of tumours of the skin the authors name one section "Cancerous Tumours," and as they describe sarcomata under this head we may presume that in this connexion 'cancerous" is used for "malignant," and yet on the very next page we find the statement that rodent ulcer "is a true cancer." Here the word is evidently used in the sense of "carcinoma" and not merely in the sense of "a malignant growth."

In describing the treatment by excision of an enlarged prepatellar bursa a curved incision with the concavity downwards is advised. The skin of this region is so moveable that in nearly every case a straight lateral incision is ample and is equally out of the way of subsequent pressure. The treatment of surgical conditions of tendon is excellent and the diagrams explain very clearly the operations described in the text.

The last hundred pages of the book deal with Aneurysm. The words "true" and "false" have been applied to aneurysms with several distinct meanings, so that it is unwise to employ them at all. The word "traumatic" is much more definite in meaning and much more applicable to those aneurysms which arise as the direct result of injury. It is difficult to speak with certainty on the matter, but we are much inclined to doubt the statement on page 307 that "the majority of surgeons employ either catgut or kangaroo tendon for ligature of arteries in continuity"; silk is probably much more frequently used for this purpose than either of the other two materials. In the account of the various methods of ligature of an artery for an aneurysm the authors call one the "old" operation; by this term they probably refer to what is usually called the method of "Antyllus," but in that operation, though the artery was tied close to the sac above and below, yet the sac was not excised. Removal of the sac after the double ligature is quite a modern operation as applied to "spontaneous" aneurysms, and if it were advisable it might much more appropriately be called the "new" operation, but it is best described as "excision of the sac."

We look forward with interest to the appearance of the succeeding volumes of this work.

Introduction to Physical Chemistry. By JAMES WALKER, D.Sc., Ph.D. London: Macmillan and Co. 1899. Pp. 335. Price 10*s*.

THE physics of chemical change is a subject of increasing importance, though at present it is somewhat packed with theory which makes it by no means easy for the young chemical student to understand. Still, no knowledge of chemistry can be adequate without an acquaintance with those physical laws which determine chemical interaction and decomposition. It is only comparatively recently that the physical side of chemistry has been recognised as equal in importance to the fundamental chemical facts themselves. Dr. Walker's book serves an excellent purpose by bringing before the chemical student more particularly a survey of physical chemistry which is sufficient to start his interest in the matter and to place his general knowledge on a more solid foundation. It is not pretended that the book gives a complete or even systematic survey of physical chemistry; its main object is to be explanatory. Thus it is written so that the two subjects may not have that academic separation which leads the student to imagine that they are perfectly independent of each other, and that so long as he does his ordinary chemistry there is no need to burden himself with another subject. Dr. Walker is professor of chemistry in the University College of Dundee and has had a large teaching experience which enables him to ma out the best progressive way for the student to acquire a sound knowledge. In the work before us, as he states, he has avoided throughout the use of any but the most elementary mathematics, the only portion of the book requiring a rudimentary knowledge of the calculus being the last chapter which contains the thermodynamical proofs of greatest value to the chemist. It must be admitted that, as we have already said, the subject of physical chemistry is so largely theoretical that it can scarcely be presented without mathematical considerations. However that may be we have in this work a plain, intelligible account of what may be described as elementary physical chemistry. Dr. Walker possesses the faculty of marshalling his statements in logical sequence, so that step by step the student is introduced to the essential principles underlying chemico-physical laws. Indeed, the book is written in such a lucid way as to render its perusal free from that irksomeness which is so often the student's experience when confronted with theoretical considerations. The book should serve as an admirable introduction to more advanced works, and when read intelligibly is calculated so to engage the interest of the reader as to encourage him to continue his quest in this particular direction of knowledge. In this matter he will be very much assisted by the references to original papers which Dr. Walker has wisely added at the end of certain chapters.

Lehmann's Medizinische Hand-Atlanten. Band XX. *Atlas und Grundriss der Speciellen Pathologischen Histologie.* Von Dr. HERMANN DÜRCK, *privat-docent* in München. I. Band: Circulations-Organe, Respirations-Organe, Magendarm-Canal. München, 1900. Verlag von J. F. Lehmann. 11 m. (*Atlas and Rudiments of Special Pathological Histology.* By Dr. HERMANN DÜRCK, private tutor in Munich. First Volume, including the Organs of Circulation and Respiration and the Intestinal Canal. With 60 Plates. Munich, 1900. J. F. Lehmann. Price 11*s*.)

THIS volume is one of a long series of very well-illustrated works the text of which is written by distinguished professors and physicians, whilst the drawings and illustrations have been made by skilled designers from typical microscopic specimens. In this case Dr. Dürck has made the preparations and the plates have been drawn by Herr C. Krapf, draughtsman to the University of Munich, with the aid of a Zeiss prism. As a rule the drawings are exact representations of objects under the microscope, but the author has, when a further exposition is required, combined the appearances afforded by two or more sections. All the plates are executed in chromo-lithography and show the effects of various colouring agents both upon the normal tissue and on the products of disease by their different tints. The diseases of the heart and circulating apparatus that are depicted are fatty degeneration of the cardiac muscle, lipoma, brown atrophy, embolism, infarct of the muscle, embolic abscess, acute interstitial myocarditis, chronic fibrous myocarditis, endocarditis (including fœtal nodes, mycotic endocarditis, and warty endocarditis), fibrinous pericarditis, tuberculous pericarditis, tendinous spots on the epicardium, arterial sclerosis, atheromatous conditions of the aorta, cholesterin plates and fat-drops from degenerated arterial wall, section of a small aneurysm of the aorta, acute arteritis, gummatous

arteritis of the subclavian artery, arteritis obliterans, tuberculous arteritis, and phlebitis. Several of the affections of the lymphatic system are also shown. The plates devoted to the respiratory system are still more numerous and the reader will find drawings of the microscopical appearances presented by emphysema, pneumonia, tubercle, emphysema, œdema, diphtheria, and many other pulmonary affections. The appearances seen are described in a running commentary which is sufficiently explanatory. The execution of the plates is delicate and accurate and the work will prove useful to those who have neither the time nor the means of pursuing original investigations on diseased structures and who are yet desirous of recognising the histological characters of the disease they have diagnosed. The present volume is to be immediately succeeded by another volume also dealing with special pathological histology, and in the course of next year a third volume is to be issued by the same author and is to be devoted to general pathological histology.

LIBRARY TABLE.

Therapeutic Electricity and Practical Muscle Testing. By W. S. HEDLEY, M.D. Edin. London: J. & A. Churchill. 1899. Pp. 278. Plates iii. Figs. 99. Price 8*s.* 6*d.*—This book contains much that is good and new. The chapter upon the Electrical Testing of Nerves and Muscles is fully and carefully written, and a good account is given of the most recent work in this important part of medical electricity. The high frequency and high potential methods of D'Arsonval are well described and illustrated by figures and photographs, and the same may be said of the chapter upon Static Methods. The current from the main, a subject which the author has made his own, is handled in a modern and effigient way. There is an interesting chapter on Induction, Induction Coils, and the Graphic Representation of Varying Electromotive Forces and Varying Currents, and the book is written in a plain and lucid style. If there is a fault to be found it lies in a certain want of proportion in the way in which the several subjects are handled and in the rarity of any decided expressions of the author's personal views and experiences. We should like to be told more plainly what Dr. Hedley himself thinks of this or that mode of treatment and in what conditions of disease he has found the results of electrical applications most valuable. We cordially agree with Dr. Hedley as to the important work which can be done by means of electricity outside of the field of nervous diseases. Attention has for too long a time been concentrated upon the electrical treatment of these affections and electricity has often been condemned because it has failed to effect cures in cases of progressive disease of the nerve-centres. The true value of electrical applications consists in their remarkable power of stimulating the activity, not merely of nerve and muscle, but of all living protoplasm. Most of the recent advances in electro-therapeutics have been in the direction of improving the apparatus and the methods for obtaining general trophic effects and of applying them to the relief of the numerous forms of defective or perverted nutrition which are met with in disease. These are the conditions in which electricity may be expected to give valuable aid to therapeutics. We notice on page 216 that the vagus is mentioned where the context obviously indicates that the phrenic nerve is meant.

Herbert Fry's Royal Guide to the London Charities (for 1900). Edited by JOHN LANE. London: Chatto and Windus. 1899. Pp. 293. Price 1*s.* 6*d.*—If charity covers a multitude of sins it also covers according to this work a multitude of agencies of every description which to our minds have not the slightest right to be so called. The two anti-vivisection societies and the Brown Institution find a place, we suppose, owing to different views of preventing cruelty to animals and may thus be described as charities. The Anti-vaccination Society does not appear in the list, but we note the names of sundry polemical "religious" societies to which in no sense can the word "charity" be applied. With these reservations we can heartily commend this work as a concise and handy guide to the various benevolent agencies of the metropolis. We note that while the Brown Institution benefited some 4500 animals the anti-vivisection societies and the "religious" societies to which we referred above make no return of those benefited.

PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

A MEETING of the General Council of this Fund was held on Dec. 21st at Marlborough House to consider the amounts to be distributed this year, the PRESIDENT (H.R.H. the PRINCE OF WALES) being in the chair.

Lord ROTHSCHILD (honorary treasurer) presented the financial statement, which, as he said, showed that the total receipts were £47,808 4*s.* 10*d.*, from which would have to be deducted the expenditure of £1547 11*s.* 5*d.* It was satisfactory to state that the expenditure this year was less than last year, although included in the expenditure was the cost of a collector, who was exceedingly useful and who collected a considerable sum of money. Considering the numerous calls made on the charity of the nation this year Lord Rothschild thought there was every reason to congratulate His Royal Highness on the success of the Fund.

Lord ROWTON, on behalf of Mr. H. C. Smith, read the report of the Executive Council, which stated that the committee recommended the distribution of £42,000 to 82 institutions. Of this sum £41,000 was allotted to hospitals and £1000 to convalescent institutions, against £32,500 distributed last year among 59 institutions. The amount received showed an increase of about £9000 on the previous year, but it was further only right to state that much of this increase was due to the munificent donations of Mrs. Brydges Williams and others. The expenses of advertising had been still further reduced as also had the costs of the office. The profits of Sunday concerts had been offered to the Fund by the Sunday Concert Society and the Crystal Palace Company, but in neither of these instances had any profits resulted, though the directors of the Crystal Palace Company kindly gave a donation of £100. Although 287 beds hitherto closed for the want of means would be now re-opened through the action of the Fund and many other improvements carried out, yet much remained to be done. There were still nearly 400 beds closed. The question of the hospital accommodation required in the various districts had not been neglected and already the increased requirements of North and South London had been practically partially dealt with.

Sir SAVILE CROSSLEY read the report of the Hospitals Distribution Committee, in which he stated that the past year had been one of increased usefulness of the Fund. The importance of the services rendered by the Fund had been more generally recognised by the public, so that the sum available for distribution to hospitals this year showed a considerable increase upon last year's amount, the figures being £41,000 now, as compared with £31,500 in the previous 12 months.

PRESENTATIONS TO MEDICAL MEN. — The members of the Liverpool Medical Institution are presenting Mr. W. Jones with a testimonial. Mr. Jones has now acted as librarian for 21 years, and as it was felt that the occasion should not be allowed to slip by unnoticed Dr. R. R. Rentoul in June last formed a committee, composed of some four other members with himself as honorary secretary and treasurer, to promote a testimonial. The proposal has been responded to with much pleasure, while the letters accompanying the subscriptions have conveyed feelings of appreciation. As showing the trust and confidence placed in Mr. Jones it may be mentioned that of 283 members over 225 have now subscribed, it being expected that the presentation will amount to 200 guineas.

THE LANCET.

LONDON: SATURDAY, DECEMBER 30, 1899.

THE ANNUS MEDICUS 1899.

Medicine.

DURING the year 1899 no startling discovery has been made in medicine, but much useful work has been accomplished and many interesting facts have been ascertained. The main efforts of investigators have been made towards increasing our knowledge in preventive medicine rather than in attempting to discover any new curative measures, although even in the latter direction important results have been obtained.

Italian investigators had previously demonstrated that a species of mosquito, the anopheles, is the intermediate host of the tertian and æstivo-autumnal malarial parasites. The subject of malarial fever is of such importance to our imperial and commercial welfare that the Government have sent out an expedition to investigate the matter. The Liverpool School of Tropical Diseases likewise sent out a commission under the leadership of Major RONALD ROSS, I.M.S., which speedily justified its formation. Within a short time of his arrival at Sierra Leone Major Ross was able to telegraph that he had found the malarial organisms within the bodies of the anopheles and further that he had proved that the insects would also act as carriers of the quartan parasite. The breeding places of the anopheles were found to be mainly the puddles which existed in the streets and elsewhere after heavy rains. These would be easy to destroy if suitable drainage were carried out. The German Commission working in Tuscany found in infested houses culex pipiens, anopheles maculipennis, culex nemorosus, and a "phlebotomist" species. The members of the Commission thought the two latter had nothing to do with the propagation of the disease. The culex pipiens was almost invariably present in malarious houses. The anopheles was absent so often that the observers were unable to agree with ROSS and GRASSI in supposing that the anopheles alone was responsible for malarial infection. Although these observations do not entirely explain the precise origin of the malarial poison the manner in which it is carried has been practically demonstrated. The germ itself does not rise from stagnant water, damp soil, &c., but its carrier does. The germ merely passes from man to man, like many other parasites, through the agency of an intermediary host, and it is this host which springs from the soil. If the breeding-places are the pools which lie close to houses, to drain these would cost only a fraction of the sum which would be required to drain the whole locality. If these presumptions are realised a great step will have been gained in prophylactic medicine.

Nearly every year some new treatment of tuberculosis, especially of the pulmonary variety, is introduced. During the past 12 months energetic steps have been taken to introduce into this country a therapeutic measure, by no means new, but which has been carried out in more detail in other countries, more especially in Germany and notably at Nordrach. It was originally known as the "open-air treatment of consumption." The year has terminated by an important discussion at the Royal Medical and Chirurgical Society which was opened by Dr. KINGSTON FOWLER who was followed by numerous other eminent members of the profession who by virtue of experience were entitled to express their opinions. Although the discussion branched off into side issues, such as the most suitable title for the treatment and the correct site in the body for taking the temperature, nevertheless, all the speakers expressed approval of the main lines upon which the treatment is carried out. Attempts to destroy the tubercle bacillus after it has gained an inroad into the lungs have been gradually discarded, and now the object of treatment is to render the soil unsuitable to the growth of the germ. By means of adherence to strict laws of hygiene in every particular, plenty of pure air, and good food, rest to body and mind when necessary, and graduated exercise when indicated, the most satisfactory results have been obtained. Sanatoria are being built in suitable parts of the country and it is sincerely to be hoped that these institutions will be conducted on strictly medical and not on strictly commercial principles, for if the latter assert themselves the sanatoria will degenerate in the same way that the so-called "hydropathic" establishments have, and become resorts for social gatherings rather than for rigid medical supervision. At the annual meeting of the British Medical Association an animated discussion took place on the Preventive and Remedial Treatment of Tuberculosis. The subject was introduced by Professor CLIFFORD ALLBUTT who reminded his hearers that the elements of the hygienic treatment are not new, but that the organisation of these scattered elements into a system of government vigorously administered under continuous medical inspection as a method, and known under the term "sanatorium method," is new. He objected to one important element of the treatment—namely, the "over-feeding"—which, he said, could never be right. In this opinion, however, he is by no means supported by all those who have had protracted experience in the sanatoria themselves.

Another very important discussion took place at the Pathological Society on the Pathology of Tabes Dorsalis and General Paralysis of the Insane. Dr. F. W. MOTT, who introduced the subject, considered that the pathological processes in the two diseases were identical—viz., a primary progressive degeneration of the neuron with secondary sclerosis and inflammatory or sub-inflammatory conditions in the vessels or adjacent membranes due to irritation caused by the products of degeneration and a formative proliferation of the glia elements. Sir WILLIAM GOWERS considered that the question of the identity of tabes and general paralysis as one disease, due to the same cause, acting on cerebral and spinal neurons, was very much a question of words, and questioned whether common causation created identity of diseases which differ so widely in symptoms as the cerebral form of general paralysis and the pure form of tabes.

A lecture which excited much interest was the Cavendish Lecture on the Etiology and Diagnosis of Cerebro-spinal Fever, delivered before the West London Medico-Chirurgical Society by Dr. WILLIAM OSLER. His remarks on the bacteriology of the disease were especially worthy of note. Professor WEICHSELBAUM 12 years ago described a diplococcus with special cultural peculiarities which he regarded as the specific organism of the epidemic form of the disease. The microbe is variously known as the meningococcus and the diplococcus intracellularis meningitidis, and Dr. OSLER regards it as the specific cause of the disease.

One of the most interesting series of lectures was the "Milroy" delivered before the Royal College of Physicians of London by Dr. G. V. POORE. He took for his subject the Earth in Relation to the Preservation and Destruction of Contagia. Amongst other facts he showed that there are certain organisms which are indigenous to the soil and ubiquitous. These organisms, if they contaminate a surgical wound or are inoculated, may cause septicæmia, erysipelas, malignant œdema, or tetanus. They are very

possibly necessary saprophytes, and we recognise that it is useless to attempt to "stamp out" the germs of these surgical contagia. Apart from accidental inoculation these organisms are not dangerous. We must often swallow them with our food and drink and inhale them with our breath and no practical harm results. These contagia are persistent in the soil and are probably most common in soils which are richest in organic matter. Dr. POORE also brought forward a number of facts to prove that the dangers of applying dung to the soil are as nothing in comparison with the advantages which would be gained by adopting this method.

The Croonian Lectures were delivered before the Royal College of Physicians of London by Dr. J. B. BRADBURY who chose for his subject Some Points connected with Sleep, Sleeplessness, and Hypnotics. These rather abstruse matters he dealt with in a most able manner. After discussing the various theories which had been propounded regarding the exact condition produced by hypnotic drugs he thought it was impossible to draw a satisfactory conclusion regarding their mode of action or the cause of sleep. He was inclined to believe that hypnotics act chemically upon the neurons, both upon the cell bodies and their dendrites, but the exact part played by the cell body and that by the terminal processes he found it difficult to determine. In concluding this part of his subject Dr. BRADBURY was obliged to agree with DEMOOR who as a result of his histological researches desisted from any attempt to formulate a theory of sleep, "and," added the lecturer, "as regards its intimate nature we with little more knowledge must do likewise." The practical remarks made in the subsequent lectures on the use of hypnotics will be found of value by all practitioners. The question of obtaining sleep for a patient is often a most urgent one and Dr. BRADBURY'S observations have added considerably to our knowledge of hypnotics.

Mr. HAFFKINE'S address before the Royal Society placed preventive inoculation on a higher plane than it has hitherto occupied. Practically a review of the results of nearly ten years' investigation in the laboratory on animals and in the wider field of special and general communities of men, it was particularly interesting as setting forth in a clear and concise manner the facts and working hypotheses which have led to the present position which preventive inoculation holds in the medical world. What JENNER and PASTEUR did respectively for small-pox and anthrax HAFFKINE is doing for cholera and plague and indirectly for typhoid fever, and he has given an impetus to prophylactic research which must in the long run be most beneficial to medical science. The results as regards cholera were remarkable. It was shown that the inoculation prevented in a very high degree people from being attacked with cholera, but it did not prevent those persons who were attacked from dying in as high a proportion as in the uninoculated. The statistics relating to inoculation for plague are most satisfactory; for instance, at the Byculla Jail there were 12 cases of plague and six deaths among 172 uninoculated prisoners and only two cases with no attacks among 147 inoculated prisoners. Other observations on a larger scale were quoted from other districts, and in each the difference in the mortality from plague between the inoculated and the uninoculated was estimated to average over 80 per cent. Further, it appears from the data collected in the larger hospitals that the case mortality among the inoculated admitted for plague is at least 50 per cent. lower than among the uninoculated.

During the year many physicians—amongst them Dr. J. W. WASHBOURN—have made clinical observations upon the use of various antitoxins. The results altogether have been satisfactory, but more extended experience will be necessary before definite conclusions can be arrived at. A large number of the troops now serving in South Africa were inoculated against typhoid fever under the general superintendence of Professor WRIGHT of Netley, and a comparison of cases of typhoid fever occurring respectively in the inoculated and uninoculated will be watched with the greatest interest. The number of soldiers who voluntarily submitted to the operation was so large that it will enable us to arrive at a definite conclusion as regards the protective value of the preparation.

Sir RICHARD DOUGLAS POWELL, in delivering the "Address in Medicine" at the meeting of the British Medical Association, also referred to the advances which had been made in our knowledge of susceptibility and immunity.

Amongst the most notable medical publications which have been produced during the year we would more especially draw attention to the completion of Professor CLIFFORD ALLBUTT'S "System of Medicine," which will long remain a standard work of reference. Reviews of the various volumes have appeared in our columns and we would only here repeat our congratulations to the editor on the triumphal success of his labours. The "Twentieth Century of Medicine" is not yet complete, but the successive volumes continue to maintain the high degree of excellence which characterised the earlier ones.

Surgery.

In the present year no epoch-making discovery or remarkable advancement has been made in the region of surgery, but in nearly every one of its many branches steady progress may be noticed. As for several years past, more has been done in the surgery of the abdomen than in that of any other portion of the body. There is still the perennial question of the best method of uniting two portions of intestine and the varied opinions that have been expressed show that while no one method is obviously superior to all others very many methods may be employed and may, in their inventor's hands at least, give good results. Objections may undoubtedly be urged against every single method, but these objections have different force in different cases. The latest addition to the modes of union depending on a special apparatus is one devised by Dr. A. MACLENNAN; it consists of a decalcified bone-tube, and to it the bowel is fastened by ligatures or rubber bands, the distal portion of the intestine being slightly invaginated. It has not yet apparently been tried on the human being, but it has been successfully employed on the rabbit whose intestine closely resembles that of man. The great merit of this method is that it requires no sutures and that the included material is soft and readily digestible. In employing the simple suture for the union of two portions of bowel the weakest point in the junction is to be found at the mesenteric border, and an ingenious suggestion for the avoidance of the danger that might arise from this has been brought forward by Mr. J. E. FRAZER. He advises that in uniting the two pieces of gut one of them should be rotated in its long axis so that the two mesenteric borders should not coincide exactly; the result of this would be that the non-peritoneal triangular space at the mesenteric attachment of each portion of bowel comes in contact with a part covered with peritoneum, with the result that rapid firm union occurs.

Volvulus of the intestine is certainly rare, so that Mr. H. LITTLEWOOD'S paper describing seven cases which he had had under his care in four years was of great interest. Of the seven cases four were examples of the volvulus of the large intestine, and of these two recovered; in three cases the small intestine was involved and one recovered. These results give a percentage of recoveries higher than usual. There has also been recorded what is probably an unparalleled case o three operations on the same patient for volvulus of the sigmoid flexure of the colon. The patient was a young man 22 years old, and in January and June, 1898, he had signs of

intestinal obstruction; on each occasion laparotomy was performed and the volvulus of the sigmoid was untwisted. The symptoms again appeared in January, 1899, and again the abdomen was opened, the twisted sigmoid was once more untwisted, and the bowel was stretched across the abdomen and stitched to the parietal peritoneum close to the anterior superior spine of the right ilium so that the volvulus might not recur. Mr. G. H. HUNTER described four cases in which severe symptoms suggested volvulus of the transverse colon; they all recovered after rotation of the body round the longitudinal axis while in the horizontal position. The very success of the non-operative treatment precluded the establishment of a certain diagnosis, though the cases are of great interest.

Protrusion of a portion of the intestine through a laceration of the anterior abdominal wall is an extremely severe accident, yet no small number of cases have been recorded where simple cleansing of the protruding bowel and replacement have been followed by complete recovery. We have published reports of two such cases during the past year; in one a cyclist collided with the shaft of a pony carriage, the abdomen was torn, and six or seven coils of intestine protruded. It was readily replaced and he made an uneventful recovery. In the second case a woman, 42 years old, was tossed by a cow; the "greater part" of the bowels was protruded through a wound in the abdominal wall and four hours elapsed before it was replaced. Here also recovery followed. Mr. J. BELL of Hong-Kong recorded a case in which at birth two feet of intestine protruded at the umbilicus; the bowel was returned and again protruded the same day, and again was returned; the recovery was complete and rapid.

A very remarkable case has been published by Dr. A. SCHWYZER of carcinoma of the transverse colon involving the stomach and pancreas; he resected the transverse colon, excised a portion of the greater curvature of the stomach, and removed a small piece of the head of the pancreas. Four months after the operation the patient felt well and had gained 25 lb. in weight.

Up to the present time there have been recorded more than 100 cases of laparotomy for perforation of a typhoid ulcer and the recoveries have amounted to rather less than 20 per cent., but the operation is still far from common and we have published this year the notes of three cases. Mr. J. E. PLATT operated and in one of these the operation was successful. Mr. PLATT'S paper is particularly valuable as it contains a very full bibliography of the subject.

Of recent years much attention has been devoted to the surgery of the peritoneal fossæ, and Mr. B. G. A. MOYNIHAN'S lectures on this subject at the Royal College of Surgeons of England form a very valuable addition to our knowledge. In this connexion may be mentioned a case recorded by Mr. MANSELL MOULLIN of strangulated hernia into the post-cæcal pouch, in which the symptoms suggested an appendicitis, but the diagnosis was made on abdominal section. In a case under the care of Mr. W. B. PARSONS a hernia had occurred through a congenital opening in an abnormal fold of peritoneum, an accessory mesocolon.

Exploratory laparotomy is now looked upon as an operation of no great severity; the risk is so slight when performed by competent hands that surgeons have recourse to it to clear up doubtful cases with no misgivings of harm being likely to follow it. Mr. A. E. MAYLARD, in a very interesting paper, strongly advocates the more frequent employment of exploratory operations on the stomach; the risk is very small, though hæmorrhage is mentioned as having occurred into the stomach after the operation in one case, and very much may be learnt about the condition of the organ. Adhesions may be found and divided, ulcers may be excised, a dilated stomach may be sutured, and especially in malignant disease benefit may result from an operation performed before the extension of the growth to neighbouring structures, and the involvement of lymphatic glands has rendered useless any surgical interference. We do not doubt that in time the operation of exploratory gastrotomy will take its place as a recognised and valued addition to our means of diagnosing and treating diseases of the stomach.

Mr. T. H. MORSE has decribed two interesting cases of gastric surgery; in one he treated an hour-glass contraction of the stomach by gastroplasty—that is, by longitudinal incision through the constriction and transverse suture of the edges of the wound in the stomach wall; all the symptoms disappeared. In the other case the well-established operation of HEINEKE-MICKULICZ was successfully performed for fibrous stricture of the pylorus.

The introduction of coiled iron wire into the sac of an aneurysm has been for many years a method of treatment which has been occasionally employed, but it can hardly be said that it has been followed by more than a small amount of success. Mr. D. D. STEWART has modified the operation by employing the coiled wire as the positive pole of an electric current, the negative pole consisting of a large pad placed on the abdomen or the back. A very slight current is used at first and it is gradually increased until it reaches 40 or even 80 milliampères. Rapid solidification of the blood in the sac follows and Mr. STEWART obtained very good results in some of his cases. The method is certainly deserving of further trial in cases which cannot be treated by the ordinary surgical means.

We have published a paper in which Mr. BERNARD PITTS described two cases of transperitoneal ligature of the iliac arteries; in one the internal iliac artery was tied for pulsating tumour of the buttock and in the other the common iliac artery was ligatured for hæmorrhage from a pelvic abscess. In neither case would an extra-peritoneal operation have been advisable and the transperitoneal method of ligature of the common and internal iliac arteries may be now considered to be the regular operation; for the external iliac artery many surgeons would probably still prefer the extra-peritoneal route.

The modern operation of excision of an aneurysm gives such excellent results in many cases that it is becoming more widely employed. Mr. H. W. ALLINGHAM has reported a case of aneurysm of the third part of the subclavian artery; this he treated at first by ligature of the first portion of the artery with much benefit, for the pulsation ceased. However, it gradually reappeared and it was decided to excise the aneurysm. This was done by resecting the greater part of the clavicle and applying ligatures to the second portion of the subclavian and the commencement of the axillary artery. The recovery was perfect. Mr. FREDERICK PAGE excised an arterio-venous aneurysm of the femoral artery and vein in Hunter's canal the result of a stab in the thigh eight years previously. No harmful effects followed the operation and the patient recovered completely. Dr. NATHAN RAW had to operate on a case in which the axilla had filled with blood as a result of an attempt at reduction of a dislocated shoulder by another surgeon; on laying open the axilla the axillary vein was seen to be torn across and the subscapular artery also. These vessels were tied and six months later all that remained from the injury was paralysis of the parts supplied by the ulnar and internal cutaneous nerves.

Two cases of congenital absence of the clavicles have been published in THE LANCET in the past year, one by Dr. G. SCHORSTEIN and one by Dr. G. CARPENTER. In the later case five other members of the same family had deformep clavicles. In both the cases a small portion of the inner end of the clavicle existed. A very curious fact about all these instances of absence of clavicles is the power and mobility displayed by the arms. It almost seems as if these children

are capable of doing more than ordinary children. Another interesting set of cases was recorded by Mr. M. G. PEARSON of Cape Colony; three coloured children, two of them sisters and the third a cousin, had congenital deficiency of the patellæ, the bones being represented merely by small nodules.

The usual treatment of gonorrhœal arthritis cannot be described as satisfactory, for in only too many cases the disease goes on to fibrous ankylosis. Dr. J. O'CONOR of Buenos Ayres and Dr. J. HOMAN of Boston have recently advocated the incising and the washing out of these joints, and they have published cases showing the great benefit resulting from this treatment, which certainly deserves a more extended trial. So long ago as 1885 Mr. CLEMENT LUCAS pointed out that the purulent ophthalmia of newborn children was liable to be followed by joint disease; he has now collected 22 published cases and the gonococcus has been shown to be present. The knees and wrists are most commonly affected. Mr. LUCAS'S paper is important because it may serve to explain some obscure forms of joint disease in young children.

Much discussion has arisen from time to time as to the percentage of cases in which removal of the breast for carcinoma has not been followed by reappearance of the disease. It was formerly said that if three years had elapsed since the operation and yet no recurrence had occurred then the patient was free from any danger of recurrence. This is now known to be too short a period. Mr. WATSON CHEYNE, in 1896, published the results of 61 cases of removal of cancer of the breast; of these 21 had been operated on more than three years previously and 12 of these were still without recurrence. He has now published the subsequent history of these 12 cases and only one has died from malignant disease and that was in the intestine. One other has died from bronchitis, but the remaining 10 are alive and well more than six years after the operation. Mr. WATSON CHEYNE is very strongly opposed to exploratory incisions into the growth, as they are very liable to give rise to infection of the surface of the excision wound and so to lead to recurrence.

The treatment of recurrent carcinoma of the breast by oöphorectomy and the administration of thyroid extract has already been tried on three cases with two successes, and to these Dr. G. E. HERMAN has now added a fourth case which proved successful. The number is too small to found any very definite opinion on, but we may reasonably hope that further trial will confirm the results already obtained. On the whole it may be said that when the thyroid extract is given, in addition to the removal of the ovaries, the results are better than those obtained after oöphorectomy alone.

Mr. CHRISTOPHER HEATH has recorded a case of epithelioma of the tongue on which he operated in September, 1875; the patient survived until 1899, when he died, but without any recurrence of the malignant disease.

The medical treatment of ascites due to cirrhosis of the liver is very far from satisfactory and tapping does not produce in most cases anything more than a temporary improvement; much interest is therefore naturally felt in a surgical attempt to treat this condition. In 1896 Mr. RUTHERFORD MORISON reported a case and we have published another case by the same operator which was successful. A third successful case has been recorded which was under the care of Dr. H. D. ROLLESTON and Mr. G. R. TURNER, but in another case of ascites they could not see any definite benefit from the operation. The operation consists in draining the peritoneal cavity and then attaching the omentum by sutures to the parietal peritoneum; vascular adhesions form by which the portal blood finds its way into the systemic circulation. It would be premature to express any opinion on the ultimate value of this operation, but it certainly promises well in special cases.

Gynæcology and Obstetrics.

No very noteworthy addition to our knowledge in either gynæcology or midwifery can be said to have occurred during the past year. As in previous years, the activity in the more strictly surgical part of gynæcology has been very marked, a great deal of work has been done, and an immense amount of literature has accumulated. A communication upon the Sexual Differences of the Fœtal Pelvis was read by Professor ARTHUR THOMSON of Oxford before the Anatomical Society. He has been able fully to confirm Professor FEHLING'S contention that the differences in form and appearance are such as to enable the observer to discriminate between the male and female pelvis early in the third month of fœtal life. Any differences, therefore, that occur between the adult and the fœtal forms during growth, whether due to the influence of pressure or muscular traction, affect both sexes alike, and such influences are in no way accountable, as has hitherto been maintained, for the characteristic features of the female pelvis as contrasted with those of the male.

Very little progress appears to have been made in the use of the x rays in cases of pregnancy. Professor VARNIER writing in April last announced that while he had been able to obtain fairly good photographs of the child's head and its relations to the pelvis, he had not so far been able to obtain complete photographs of the whole fœtal skeleton in any one case. It is possible to obtain a good idea from an x ray photograph of the volume, position, degree of flexion, and amount of engagement of the head, but so far no attempts have been successful with the mother in the dorsal position in obtaining a complete view of the whole fœtal skeleton in utero. He believes the difficulty to lie in the fact that the pelvic and abdominal parts of the uterus lie in different planes, and farther in the extreme thickness of the intervening maternal tissues—viz., the back muscles and the spinal column.

At the International Congress of Obstetrics and Gynæcology held this year at Amsterdam a very important discussion took place upon the Indications for the Operation of Cæsarean Section as compared with those for Symphysiotomy, Craniotomy, and the Induction of Premature Labour. Professor PINARD who introduced the subject gave the results of his first 100 cases of symphysiotomy. The maternal mortality was 12 per cent. and the infantile mortality 13 per cent. Of the 12 maternal deaths four women died from complications quite independent of the operation. Of the remaining eight cases in three Professor PINARD considers that although the patients died from septic infection, as the symphysiotomy wound was not infected, the operation played no part in the production of the sepsis. He concludes, therefore, that five alone of the 12 deaths can be considered as directly due to the symphysiotomy, reducing his mortality to 5 per cent. Of the 13 children who died, five succumbed either during their birth or a short time afterwards, while eight died within the first three weeks. In only six of these cases does he consider that the death of the child could be attributed to the operation. 22 women who had undergone the operation of symphysiotomy had become pregnant again. Of these six have been symphysiotomised for the second or third time, while 16 have been delivered spontaneously. These figures may well be compared with the results of Professor LEOPOLD'S first 100 cases of Cæsarean section and Porro's operation reported by him last year and mentioned by us in our annual *résumé*. Professor PINARD concluded his report by recommending that the only operative procedures considered justifiable in cases of contracted pelves should be momentary enlargement of the pelvis by symphysiotomy, pubiotomy, ischio-pubiotomy and coccygotomy, Cæsarean

section with or without total hysterectomy, and embryotomy upon the dead child.

Very marked differences of opinion prevailed amongst the speakers, and few were prepared to go so far as the distinguished introducer of the discussion. Professor LEOPOLD thought that the field for symphysiotomy was a very limited one and that the alternative operations of Cæsarean section and craniotomy must be carefully considered in every case in which the former operation was recommended for adoption. He did not at all agree with the opinion that craniotomy upon the living child must be entirely given up and he considered that it was at times a necessity and perfectly good treatment. In spite of Professor PINARD'S earnest advocacy it is doubtful whether the operation of symphysiotomy will ever make much headway in this country, and nothing has been adduced lately to show that the maternal mortality is likely to be less than from 5 to 8 per cent. if the operation be performed in any large number of cases.

Another practical question of obstetrical importance considered at the Amsterdam Congress was the influence of position upon the form and dimensions of the pelvis. Reports were brought forward upon the subject by M. BONNAIRE, M. BUÉ, M. PINZANI, and others. The preponderance of opinion appeared to be that Walcher's position did undoubtedly in the case of the gravid patient cause some enlargement of the true conjugate diameter of the pelvis. As to the actual amount of increase opinions varied; in some cases it appeared to be but slight, in other cases considerable. The most important opponents of this view were Professor PINARD and Professor VARNIER, who contended that the increase was illusory and that the good results obtained by the assumption of the posture were capable of other explanations.

Some interesting cases of Extra-uterine Gestation have recently been brought before the Obstetrical Society. Dr. CULLINGWORTH reported a case of probably early tubo-uterine gestation complicated by the presence of fibromyomata of the uterus. In this case the fœtus appeared to have been extruded at an early period from its original tubo-uterine sac either into the abdominal cavity or into a diverticulum of the tube. From its size when removed it seemed probable that it had continued to grow after its escape from its sac, and that the cord which was ruptured had been torn through later than the time of extrusion. Mr. BLAND SUTTON reported a case of tubo-abdominal pregnancy in which the fœtus was delivered alive by cœliotomy after full term. In this case it appeared certain that the amniotic sac had ruptured near full term allowing the escape of the fœtus amongst the intestines The mother made a good recovery but unfortunately the child died. The placenta was attached to the left mesometrium and the great omentum. It was removed together with the sac. Mr. BLAND SUTTON thought that his case supported Mr. J. W. TAYLOR'S view that if a fœtus escape from the tube into the abdominal cavity with its amniotic membrane uninjured so long as the placental blood-supply is sufficient and the amnion intact it is possible for the pregnancy to continue. The case also demonstrates that it is possible for a fœtus near full term to continue to live in the abdominal cavity even after rupture of the amnion. The view that the integrity of the amnion is a necessary condition for the further development of the fœtus is denied by Professor NEUGEBAUER in a recent paper. He holds that the life of the child depends rather upon the continued vitality of the cord and placenta and the continued power of the latter to nourish the child. Probably the amount of damage done to the placenta is of more importance than the persistence of the amniotic membrane. In cases where an early ovum is extruded from the tube so gradually as to preserve the amnion uninjured the damage done to the placenta will be much less than when the disturbance of the anatomical relations has been sufficient to rupture the amnion. In the latter case the injury to the placenta is likely in the majority of instances to have interfered with its functions to such an extent as secondarily to cause the death of the child.

A somewhat similar case to Mr. BLAND SUTTON'S is to be found in the British Gynæcological Society's journal. Mr. MAYO ROBSON operated upon a case of ectopic pregnancy in which he was able to remove the entire fœtal sac together with the fœtus two months after full term. The operation did not offer any special difficulties and the patient made an uninterrupted recovery. Dr. A. DONALD reported a case of intra-ligamentous gestation in which the fœtus was removed through the vagina at the seventh month. The operator availed himself of a preliminary abdominal section so as to determine the exact relation of the sac and placenta before proceeding to removal of the fœtus by the vagina.

Numerous cases have been reported in which anti-streptococcic serum has been employed and its advantages and disadvantages continue to excite a great deal of interest. The subject was reported upon by Dr. H. SPENCER and discussed at the annual meeting of the British Medical Association. Dr. SPENCER was not favourably impressed with the utility of the serum and a similar though even more adverse opinion was expressed by the Committee of the American Gynæcological Society which was appointed to consider the whole question. That good results are to be obtained from the serum is still believed by many and no doubt in a short time we shall be better able to judge of the cases suitable for its employment, and so improvements in its mode of use may lead to better results than have, so far, been obtained. It seems clear that it rarely does any harm, even if its use be often unattended with any marked or certain results. One of the most striking conclusions arrived at by the American Committee was that curettage and abdominal hysterectomy in cases of streptococcic infection after full term delivery were unhesitatingly to be condemned and that very probably a large part of the excessive mortality in the recorded cases was in part attributable to the too frequent employment of the former operation. The value of the serum is still so uncertain a quantity that its administration should not be allowed to interfere with the use of other proved methods of treatment.

The late Mr. LAWSON TAIT contributed an important paper to THE LANCET in February upon the treatment of unavoidable hæmorrhage by removal of the uterus. He performed this operation in the case of a patient who had been bleeding severely for five hours, the membranes had ruptured, the cervix was rigid, the external os closed, and the uterus firmly contracted round the child. Mr. TAIT determined to remove the uterus by the Tait-Porro operation and this he did with a successful result to the mother, although the child died a month later. Any plan of treatment recommended by so high an authority as the late Mr. LAWSON TAIT must, of course, command our respectful attention. We venture, however, to think that there are few if any cases of placenta prævia in which the performance of abdominal hysterectomy would ever be either justifiable or necessary. The maternal mortality of this complication does not vary from 20 to 50 per cent. as is assumed in the paper, but in cases properly treated is rarely more than from 5 to 8 per cent. In the hands of so accomplished a surgeon as the late Mr. TAIT the dangers of the Tait-Porro operation were no doubt very small, but if such a treatment of cases of placenta prævia became at all common we fear that the consequences would be most disastrous.

We have been enabled to report several successful cases of Cæsarean section during the last year. Two of the most interesting of these occurred in Calcutta and Jamaica

respectively, and were performed upon a Bengali woman and a negress. The first patient was the victim of advanced carcinoma of the cervix and the operation was performed some time after the membranes had ruptured and when a considerable amount of dilatation of the cervix had taken place. The mother recovered from the operation but the child survived only three and a half days. The growth was too extensive to permit of any radical operation being performed. The second case was that of a negress, 30 years of age. A large, pear-shaped fibroid tumour was present, measuring nine inches by seven inches by five and a half inches, extending down into the pelvis and reducing the available conjugate diameter to one inch. The uterus was found to contain twins, one weighing five pounds and the other four and a half pounds. At the time of the report, seven weeks after their birth, the children were both alive. The case is an interesting one as showing that the presence of a large fibroid tumour is quite compatible with the progress of a twin pregnancy to term, and further from the fact that there was no failure on the part of the uterus to contract and retract firmly, and no excessive hæmorrhage either at the time of the operation or afterwards.

The surgical treatment of fibro-myomata of the uterus has occupied a good deal of attention during the year. It was discussed both at the Congress of the German Gynæcological Society at Berlin and at the International Congress at Amsterdam. The majority of the gynæcologists taking part in these discussions agreed that it was only justifiable to operate upon fibroid tumours definitely causing symptoms. As to what were the best methods and the best form of operation opinions varied very widely. As far as abdominal hysterectomy was concerned the supra-vaginal variety appeared to be the one most universally recommended.

In this connexion the observations of ZWEIFEL and ABEL are of much importance. The latter finds that the removal of the body of the uterus ultimately leads to atrophy of the ovaries. Patients who had had their uterus removed but not their ovaries gradually ceased to menstruate about three years after the operation unless care had been taken to leave a small part of the mucous membrane of the body of the uterus behind. If this was done premature cessation of menstruation did not occur. If these observations be correct it would appear necessary to amputate the uterus not through the cervix but at a somewhat higher level so as to leave a part of the body behind and in this way to avoid the appearance of the menopause before its proper time.

Mr. BLAND SUTTON opened a discussion at the meeting of the British Medical Association upon the Natural Menopause as Contrasted with the Artificial Menopause produced by Removal of the Appendages and the Artificial Menopause produced by Removal of the Uterus without Removal of the Appendages. No increase to our knowledge of these conditions resulted from the discussion and further observations will have to be made upon this most important point. In the meanwhile if the onset of the artificial menopause be only postponed for three years that gain of time is sufficient to warrant the uterine appendages being left whenever it is possible to do so in cases of supra-vaginal amputation of the uterus for fibro-myomata. A very valuable monograph was presented by Mr. ALBAN DORAN to the Obstetrical Society upon Fibroid Tumours of the Broad Ligament. Mr. DORAN had removed successfully from a patient, aged 28 years, a tumour of this kind weighing 44½ pounds (20 kilogrammes). The symptoms caused by it were albuminuria and anasarca, the catamenia remaining regular. The tumour grew in such a way that the lower ribs were not splayed out by it but pushed back behind it. The case was one of considerable interest as the largest example of this kind of tumour ever removed, and its value was greatly enhanced by the fact that the author had collected 39 cases of tumours of the same kind of which he presented an exhaustive analysis and tables. The method recently introduced of crushing the broad ligaments with specially constructed forceps so as to arrest hæmorrhage and avoid the use of ligatures has led to the invention of a number of ingenious examples of these so-called angiotribes. Mechanical assistance towards the performance of operations which can be readily carried out with the help of ordinary surgical appliances is always to be regarded with suspicion, and we doubt if this method of arresting hæmorrhage by angiotripsy is ever likely to come into vogue or to find any but a very few adherents. There is no reason why simple surgical rules and procedures should not be applied to the broad ligaments as well as to other parts of the body. The failure to apply simple surgical principles in the performance of operations upon the uterus has undoubtedly hampered the progress of gynæcological surgery.

The pathology of eclampsia is an unfailing source of material for the theorists. There has recently been a revival of the theory of its bacillary origin and the view that now finds most favour is that it is a hepatotoxæmia. There are many arguments that may be advanced against this view and one of the most important and certain is the fact that the liver changes, the hæmorrhages, the anæmic necroses, the liver cell emboli, and the thromboses, are by no means constantly found and bear no relation to the severity of the attacks. Professor STROGANOFF has recently published a series of papers intended to prove that eclampsia is a contagious disease. He bases his view upon 118 cases in his own and in other obstetric institutions. He thinks that the contagious principle persists for three weeks from the time of the onset of the disease and that it is probably transmitted by the respiratory tract, careful researches having shown that the genital tract may be excluded. He advocates rigorous isolation of each patient if not of the persons nursing her. It is certain that we are as far off finality in our views as to the causation of eclampsia as we ever were, and no doubt by this time next year this latest theory will have gone the way of all the other theories that have preceded it. The condition of the fœtal liver and kidneys in cases of eclampsia requires further investigation, since changes undoubtedly at times occur in them. Although, as we said at the beginning of this article, no very great advance has been made in the department of obstetric medicine, yet a great deal of work has been done and our knowledge upon many subjects has been definitely amplified and rendered more certain.

Amongst the books that have been published two of the most important are the concluding volumes of Professor VEIT'S Handbook of Gynæcology, and Professor MARTIN'S work upon Diseases of the Ovary and Parovarium.

Pharmacology and Therapeutics.

Amongst the questions that have in the present year ripened considerably and have been urged forward strenuously towards a final settlement that of the prevention and treatment of tuberculosis has taken a very prominent place. Owing perhaps to want of fully grasping the significance, from a prophylactic point of view, of the discovery of a definite infective bacillus by the profession, and perhaps in part because there are political and commercial as well as humane interests concerned in the question of the prevention of consumption, this important matter, instead of being calmly and forcibly considered by experts in human and veterinary medicine has become the subject of popular agitation. The establishment of sanatoria has done much in reducing treatment to a system, though there is nothing new in the methods employed there or which might not be carried out in a private house under good medical and sanitary supervision. A liberal diet, ample fresh air, and cleanliness are the principles involved, with some immunity from the risks

of secondary septic infection which often play an important part in the course of the disease, and the advantage of continual supervision in carrying out details of treatment and meeting various complications. Learning the discipline of illness is of great value to the patients themselves and the practice of collecting and destroying all sputum, if generally carried out in conjunction with measures to prevent overcrowding, may be counted upon to still further diminish the frequency of occurrence and mortality of the various forms of tuberculosis. In the treatment of acute broncho-pulmonary affections Dr. SEIFERT, in THE LANCET of Sept. 9th, urged the employment of creosotal in full doses of 40 grains four times a day, and claimed for the drug the power of rapidly reducing the fever, cutting short the disease, obviating complications, and improving the general symptoms without producing other effects or disturbing the digestive tract, in such diseases as pneumonia, bronchitis, and broncho-pneumonia.

The progress in preventive inoculation as applied to epidemic disease in India is well exemplified in the discourse delivered before the Royal Society by Mr. W. M. HAFFKINE, C.I.E., and reported in THE LANCET of June 24th. Observations among a mixed community of inoculated and uninoculated individuals living under exactly similar conditions showed an incidence of cholera during the effective period between the fifth and four hundred and twentieth days subsequent to inoculation 62 times less in the former as compared with the latter, the rate of mortality in those who actually contracted the disease being practically unaffected. The difference in mortality from plague between inoculated and uninoculated parts of communities was estimated to average over 80 per cent., approaching often 90, the case mortality among the inoculated being 50 per cent. lower than among the uninoculated plague cases. So far as is at present known it can be said that the effect of plague inoculation lasts for at least the length of one epidemic, which on an average extends over from four to six months of the year.

A system of preventive inoculation against typhoid fever has been inaugurated and is now under extensive trial in India and South Africa, and seeing that the period of life during which the new comers remain susceptible to typhoid fever extends only over a few years it seems that the application of the system, when properly organised, is likely to prove of a very high practical value. Though the injection of antityphoid serum is regarded as rather bactericidal than antitoxic in its effects a case reported in THE LANCET of Sept. 16th seems to indicate that it either possesses antitoxic properties in addition or that the formation of such in the blood takes place with quite unexampled rapidity, the injection of three and seven cubic centimetres of the serum being followed by immediate rise of temperature with subsequent fall to normal and a remarkably rapid improvement in the general condition with ultimate recovery in a severe and prolonged attack of the disease.

In regard to serum therapeutics the value of CALMETTE'S antivenene has been established. A dose of from 10 to 20 cubic centimetres, or in an extreme case of 40 cubic centimetres, administered by intravenous injection, if given from one to three hours after snake-bite should suffice to prevent death. Major S. J. RENNIE, R.A.M.C., in THE LANCET of Nov. 25th records the case of a Hindu boy who recovered after subcutaneous injection of 12 cubic centimetres of a serum which had been kept four years, though apparently the patient was moribund, with cessation of natural respiration and the pulse-beats reduced to four per minute, showing that even the most hopeless cases may recover under the treatment. Instances of recovery from traumatic tetanus under treatment by serum are recorded by C. L. FRASER in THE LANCET of August 26th and by Dr. KÖHLER in the *Münchener Medicinische Wochenschrift*, No. 46, 1899, besides the accounts by Dr. ROUX and Dr. BORREL in the *Annales de l'Institut Pasteur*, April, 1898.

The anti-streptococcic serum has been employed with good effect in cases reported by Dr. MITCHELL BRUCE in the *British Medical Journal*, July 8th, 1899, in the *Philadelphia Medical Journal*, June 3rd, 1899, and in the *Zeitschrift für Hygiene*, Band xxii., p. 485, and also by Mr. C. T. B. MAISEY in THE LANCET of August 26th and by Dr. T. B. GRIMSDALE in THE LANCET of Sept. 9th. Reports of several other cases will be found in the Mirror of Hospital Practice during the year where improvement appears to have followed the treatment.

The value of subcutaneous or intravenous injections of normal saline solution in cases of severe hæmorrhage, collapse, and in various toxæmic conditions has been borne out, and gratifying instances of recovery in various conditions treated in this manner have been recorded, notably in a paper read by Dr. THOMAS F. REILLY in the New York State Medicine Association on Oct. 20th, 1898.

As an important sequel to a case in which saline solution was employed in diabetic coma, the death of a patient is reported in THE LANCET of August 26th, 1899, 243 days subsequently, in a second attack of two hours' duration, by Dr. THOMAS OLIVER of Newcastle-on-Tyne.

Following up the observed influence of light in checking the growth of bacteria and annulling their destructive effects on living tissues Dr. FINSEN of Copenhagen has devised a system for the treatment of diseases on the surface of the body by means of concentrated light rays from the sun or arc lamp. He eliminates the heat rays at the red end of the spectrum by means of blue-tinted alum solution within a hollow plano-convex lens for sunlight and by the employment of quartz lenses with the electric arc. 350 patients suffering from lupus vulgaris have been subjected to this method of treatment with satisfactory results, the affected areas being exposed to the influence of the light rays for a period of from one to three hours at a time daily over a period of some weeks or months. The disease was arrested in all the cases and the cosmetic results were excellent, the treatment being reliable, painless, and superior to other methods in the infrequency of relapse. The erythematous form was not appreciably improved, but with alopecia areata the results were more promising.

With a similar end in view Dr. E. SCHIFF of Vienna has invoked the use of the x rays in the treatment of lupus vulgaris and erythematosus with excellent results, which have also been sustained with sycosis and favus, but the most remarkable success was met with in the removal of superfluous hairs.

As an example of the successful treatment of an extremely painful and intractable form of disease may be mentioned the intra-neural injection of osmic acid (1·5 per cent. solution) in obstinate cases of trifacial neuralgia. The method is described and a series of 10 cases are recorded by Mr. WILLIAM H. BENNETT in THE LANCET of Nov. 4th, 1899. In all of them relief was immediate and, contrary to the usual experience in such cases, progressively complete, so that it promises to be permanent.

A remarkable case of implantation of a human ovary for the relief of symptoms accompanying artificially induced menopause with complete success is recorded in America, and experiments in rabbits indicate that such a procedure may be followed by pregnancy.

Among drugs effecting vaso-dilation and which have been employed with success in relieving arterial tension the most useful modern addition has been erythrol tetranitrate, administered preferably in chocolate tablets containing half a grain. In a paper read by Dr. HUGH WALSHAM at the British Medical Association it was shown that patients suffering

from various forms of heart disease, from interstitial nephritis, and from Raynaud's disease were benefited by the drug, and in Bright's disease Dr. J. B. BRADBURY cited an instance of sleeplessness being relieved by a single dose. All danger of explosion is obviated by using the tablets. Hydrobromate of hyoscine administered hypodermically in doses of from $\frac{1}{100}$th to $\frac{1}{70}$th of a grain two or three times a day as been employed with rapid improvement and permanent good effect in chorea.

In tropical dysentery an extract and tincture of the Monsonia Burkei of the South African Karoo collected and introduced by Mr. John Maberly—has proved of great value, not only in dysentery, of which 100 consecutive cases treated with the drug are reported by Mr. Maberly with only one death, but also in hæmorrhagic ulceration of the stomach and intestine. The drug has a long-standing reputation among the natives and the Boers, but has only recently been identified and used in Europe in cases of acute and chronic ulceration of the stomach and intestines. Methylene blue administered in the form of pill with about half its weight of powdered nutmeg, and in doses of from one to six grains three times a day, owing to its recognised selective affinity for the nerve cells and axis cylinders in living animals, has proved of considerable value in such affections as sciatica, migraine, neuralgia, and herpes. In diabetes mellitus methylene blue appears to act somewhat in the same manner as antipyrin. When given in full doses up to six grains three times a day during a period of six weeks sugar has been found to disappear from the urine. Locally the drug diminishes the pain of cystitis and gonorrhœa, the urine being highly charged with the drug and acquiring a bright green or blue colour when it is given internally. In cases of gonorrhœa complicated with rheumatism or neuritis it has proved of special advantage. In simple rheumatism the drug has also been given with good effect, as it has in intermittent fever both in the acute stage and for the relief of the after-effects such as enlargement of the liver and spleen. The general effects of the drug resemble those of antipyrin and salicylic acid; when given after food with powdered nutmeg it excites little irritation in the stomach, the most noticeable feature at the time being the colouration of the urine, of which patients should be warned.

The use of aluminium chloride in doses of five grains and upwards repeated three times a day has proved remarkably efficacious in locomotor ataxy. Though given originally for the purpose of relieving the lightning pains in this affection it has in some cases effected considerable improvement in the gait and general condition of the patients.

Synthetically prepared salicylate of methyl (artificial oil of wintergreen) is an excellent local application in rheumatic and gouty affections when these are of limited extent. It is of striking value in isolated arthritis and teno-synovitis, has been followed by recovery in three or four days in long-standing cases of erythema nodosum and in muscular rheumatism has afforded immediate relief. As a local application oil of wintergreen has an advantage over the internal administration of salicylates in not disturbing the digestive organs and in the more rapid effect of the remedy. The oil should be applied by sprinkling from 30 to 60 drops on folded gauze covered by oil silk and bandaging the application firmly over the affected region; its efficiency is promoted by steeping the gauze in hot water so as to combine with it the effect of a hot fomentation. The odour, though aromatic, is very penetrating and lasting and is very noticeable in a room or even in a large ward.

Ophthalmology.

In ophthalmology one of the principal events of the year has been the opening under Royal auspices of the new buildings of the Royal London Ophthalmic Hospital. These are situated in the City-road and are both conveniently placed and commodious. They are fitted up with every modern improvement and are adapted, not only for a hospital, but for a school where the diseases of the eye can be scientifically studied and treated. The International Ophthalmic Congress met in August at Utrecht under the genial presidency of Professor SNELLEN, and a very warm and hospitable reception was accorded to the members who attended. So great has been the extension of this department of medicine that it was found necessary to divide the subjects under consideration into three groups, devoted respectively to the anatomical, to the biological and optical, and to the clinical and therapeutic aspects of ophthalmology. The Congress was a highly successful one, attracting many foreign members to the school which DONDERS illuminated and is now represented by Professor SNELLEN, and many interesting papers were read. At the annual meeting of the British Medical Association, which took place at Portsmouth, the section of Ophthalmology was presided over by Mr. SIMEON SNELL of Sheffield, who in his opening address drew attention to the frequency of eye accidents in various trades, accidents that involve in nearly all cases temporary, and in many permanent, disablement. The statistics of the Miners' Permanent Benefit Fund, a very reliable source of information, show that out of a total number of nearly 50,000 accidents of all kinds that have occurred during the last 14 years, the eyes were affected in a little more than 5 per cent., giving the very serious number of 2506 cases. Mr. SNELL gave details of the various occupations that are dangerous in this respect and described the means that are, or at least should be, employed to prevent them. The Ophthalmological Society of Great Britain has elected for its President Mr. ANDERSON CRITCHETT, an honour which it is to be regretted his talented father did not live to enjoy. The popular son will, it is certain, satisfactorily discharge the duties of the presidentship rendered vacant by the retirement of the outgoing President, Dr. SWANZY, and we feel sure the members of the society are anxious to acknowledge how greatly the society is indebted to Dr. SWANZY, not only for the admirable manner in which he has filled the chair and promoted the discussions as they arose, but for the regularity of his attendance at the meetings, although the crossing of the Irish Sea in the winter months is not always conducive to comfort.

A new set of optotypes as a test for vision has been proposed by Dr. E. LANDOLT. The types consist of incomplete circles of various diameters with a small segment corresponding to an angle of one degree deficient. They therefore resemble the capital letter C. The advantages claimed for them are that they can be used to test the sight of the illiterate in all countries and languages alike. The relations between the eyes and the teeth have been discussed in a long article by Dr. LAGLEYZE of Bordeaux. In his opinion, which is fortified by a large number of recorded cases as well as by his own experience, the ocular lesion is generally of a reflex nature. But it sometimes proceeds from contiguity and in particular from the extension of alveolar periostitis to the orbit or eye, whilst in some cases it may be due to the intermediation of the venous system and microbic infection. M. ABADIE has advanced a new hypothesis of the nature of zona ophthalmica, believing it to be primarily, not a lesion of the peripheral sensory nerves, or a lesion of the medullary centres, but a pathological condition of the arterioles and of the vaso-motor nerves, which effect the dilatation of the arterioles at the seat of the eruption. The treatment which on this supposition he proposes and which he has found successful is the administration of sulphate of quinine in large doses and for a considerable period.

The practice of extraction or solution of the lens in cases of high myopia appears to be gaining ground, since the operation

is not attended by any unusual dangers and when successful enables the patient to wear much feebler concave glasses. The employment of mercurial frictions in some cases of suppurative iritis following the operation for the extraction of cataract had been strongly recommended by Dr. VIAN of Toulon, excellent results having been obtained by him in several threatening cases. The delirium that is occasionally observed to follow cataract operations has been made the subject of an article by Dr. CH. GUENDE who is of opinion that it is usually, if not always, due to the psychic disturbance occasioned by the occluding bandage, since it quickly disappears as soon as this is removed. The experiments of HAMBERGER have led him to believe that the iris under normal conditions adheres so closely to the surface of the lens that the anterior and posterior chambers of the eye are completely separated from each other, for he finds that fluorescin injected into the posterior chambers does not penetrate into the anterior chamber even when the pupil is moderately dilated, but if the anterior chamber be punctured through the cornea the fluorescin at once rushes into it, forming striæ. A new and daring proceeding for the treatment of glaucoma has been proposed and carried into effect by Dr. GEORGE F. SUKER with some degree of success. It consists in the removal of the superior cervical ganglion of the sympathetic. The effects observed were almost immediate cessation of pain with reduction of tension, slight contraction of the pupils, slight temporary dysphagia, and excessive lacrymation which lasted for some days. The respiration and pulse remained unaltered and there was no drooping of the lid. The vision which was lost before the operation was not restored. A case of double chronic glaucoma in which ablation of the superior cervical ganglion on each side was performed but with a better result is recorded by M. ABADIE, the vision undergoing considerable improvement. In a third case the improvement was doubtful. It is remarkable that so serious an operation should be attended by so little subsequent inconvenience. A discussion was opened at the Portsmouth meeting of the British Association on the pathological significance of sympathetic irritation by Mr. RICHARDSON CROSS of Clifton. There seemed to be a general consensus of opinion amongst those who took part in the discussion that followed the reading of the paper that sympathetic irritation and sympathetic inflammation are distinct affections and, as Dr. DE SCHWEINITZ remarked, each possesses its own pathology which requires to be separately worked out; that in some instances the distinction between the two is at present exceedingly difficult to define; and that in cases where an injured eye was likely to set up irritation the best practice consists in removing it at an early period. Neither the theory of reflex neurosis nor that of the extension or transmission of microbic infection will account for all cases. Dr. ADOLPH BRONNER, for example, reported a case of sympathetic ophthalmia caused by a blow but unaccompanied by any external wound, which seems to dispose of the latter theory, whilst the persistence of the disease in the secondarily affected eye after the removal of the exciting eye seems to be opposed to the theory of reflex neurosis.

Amongst the therapeutic means that have been proposed protargol has been in particular recommended as a substitute for nitrate of silver in such affections as acute and phlyctenular conjunctivitis, and in infectious wounds of the cornea with hypopyon, the solutions employed varying in strength from one or two to eight or ten grains to the ounce. Its advantages are that it does not irritate the eye and that it is not productive of pain. Some of those who have used it extensively, however, consider it to be less effective than the nitrate of silver. Euphthalmin has been employed as a mydriatic. It produces great dilatation of the pupil in the course of from 20 to 25 minutes, the effect completely passing off in from three to six hours. Chemically it is nearly allied to eucain. Dr. SUKER has used thiosinamine, a substance obtained from the oil of mustard, and has found that, taken in small doses, it has a specific action on keloids and on old cicatrices and that it renders nebulous cornea clear. Airol—that is, the gallate of the oxyiodide of bismuth—has been found useful as a substitute for iodoform.

A new registering perimeter has been devised by Dr. PARISOTTI. Radiography has been frequently employed to determine the position and thus facilitate the extraction of foreign bodies from the interior of the eye; this method is not applicable when the particle is very small.

The third and fourth volumes of OLIVER and NORRIS'S valuable System of the Diseases of the Eye, the third edition of Dr. G. E. DE SCHWEINITZ'S Handbook on Diseases of the Eye, a Text-book on Diseases of the Eye edited by Dr. G. E. SCHWEINITZ and Dr. B. A. RANDALL, and a good treatise on Refraction by Dr. A. S. PERCIVAL of Newcastle, have recently been published.

Forensic Medicine.

Numerous actions at law in which medicine participated have been heard during the year. Dr. REICHARDT of Ewell was prosecuted at the Surrey Quarter Sessions for unlawfully receiving and detaining for payment a person alleged to be a lunatic who committed suicide, his house not having been licensed. Evidence was forthcoming that the deceased had not evinced symptoms of mental derangement prior to the fatal act that would justify her detention on certificate. We were glad to record an acquittal. In the case of FRANKS *v.* HARGREAVES the defendant was sued for damages for negligence in treatment. There was abundant testimony to disprove the allegations. The summing up of the judge, which was strongly in favour of the defendant, was endorsed by the verdict of the jury.

In the County Court at Maddeley Dr. COLLINS sued the Rev. W. J. JOHNSON for payment of fees which had been declined on the ground of the "incompetence, indifference, or idleness" of the medical man. Judgment was given for the plaintiff. At the Birmingham Assizes (Civil Court) the cause KIDD *v.* CRANE was tried. This was an action for damages which arose out of a charge of malpraxis in connexion with the Droitwich Isolation Hospital. Dr. H. C. KIDD succeeded in disproving the truth of the statements and a verdict for £150 was returned in his favour.

It is a pleasure to record that there has been generally a marked diminution in the number of indictments for criminal abortion, and particularly as regards cases in which members of the profession have been implicated. The fate of COLLINS and WHITMARSH seems to have had a deterrent influence. Lord BRAMWELL'S decision that the crime is that of murder has to some extent been discounted by recent charges to juries made by some of Her Majesty's judges. Although in many cases prisoners have been found guilty of the capital offence and have been sentenced to death it has rarely happened that the culprits have undergone the extreme penalty of the law. Such divergence between sentence and punishment was the ground of Mr. Justice DARLING'S advice to a jury at the Chester Assizes, not to find the prisoner guilty of murder if it seemed plain to them that a reprieve would be granted. We have more than once drawn attention to the unsatisfactory condition of the law as it now stands and have urged that the Legislature should either reduce the crime to that of manslaughter or establish different grades of murder so as to give juries a wider discretion than they now possess.

We have had to chronicle several cases of exhumation in which criminality was suspected or charged. In Yorkshire a body was exhumed on the suggestion of poisoning with a view to the acquisition of pecuniary

gain. The analysis made by the Treasury expert yielded negative results. A singularly painful case came before Mr. Justice BUCKNILL. An aged couple lived in a somewhat isolated spot. The husband died; an inquest was held and the medical man who examined the body stated that it was a clear case of fracture or dislocation of the neck. After the widow was committed for trial by the magistrates the Home Secretary on the strength of urgent representations ordered a further examination of the body with the result that death was proved to have arisen from pneumonia and that there was no injury to the neck. We have already endorsed the remarks made by the judge on discharging the recognisances.

At Galleywood, near Chelmsford, an exhumation was made a fortnight after burial. A complete post-mortem examination had been conducted by a local practitioner, but on account of evidence in possession of the police which raised important questions as regards the nature and age of certain bruises and the probable period at which insensibility and death would supervene on a cerebral hæmorrhage it was deemed advisable to have the opinion of an expert. The prisoner, who was convicted of the murder of his wife, was sentenced to death and was hanged.

A fourth case occurred at Wortham after a month's interment. Although the prisoner was charged with murder by stabbing the deceased woman in the neck the coroner did not issue a post-mortem examination order, and consequently only a partial examination was made by the medical man called to inspect the body. It seemed clear that death was due to hæmorrhage and that probably the large vessels of the neck were injured. On careful dissection the carotid artery and jugular vein were found to be intact, but the thyro-hyoid membrane was divided and this allowed a quantity of blood to run into the air-passages. We consider it imperative that in all cases of alleged murder a thorough necropsy should be conducted.

A charge was heard by Mr. SLADE, the magistrate, in which Dr. STEVENSON gave evidence as to the results of certain analyses. Counsel for the defence contended that Dr. STEVENSON had not personally performed the analyses and that therefore a conviction could not be obtained. The objection was upheld. Apart from an opinion on the merits of the case we quoted a contrary decision by the Queen's Bench.

Quite recently we referred to two cases of great medico-legal interest tried at the Leicester assizes. In the former a man was tried and convicted of the exceedingly rare crime of the manslaughter of a child by the infliction of injuries upon it whilst in utero. In the latter the prisoner was found guilty of wounding with attempt to murder his wife by cutting her throat. At the time he was suffering from delirium tremens which rendered him irresponsible for the crime in the eyes of the law but subjected him to incarceration at Broadmoor as a criminal lunatic.

At last a conviction has been obtained for the sale of quack medicines alleged to be a specific for female ailments. We refer to the case of certain persons trading under the name of "Madame FRAIN." It was part of the prisoners' device to resort to an apparently innocent procedure, inasmuch as they required of the purchasers a statement in writing that the person who was to take the drug was not pregnant, but it was abundantly clear that the advertisements were published in such terms that the opposite condition would be that for which the "specific" would be bought. It was with extreme satisfaction that we learned that in future those who published similar advertisements would be held to be participators in the offence.

In December, 1899, two very remarkable cases were decided, one in the Divorce Court and the other at the Old Bailey. Mr Justice BARNES at the beginning of the year granted a decree *nisi* of nullity of marriage to a young Jewess. At the same time he sent the depositions to the Queen's Proctor who intervened to show cause why the said decree should not be made absolute. The grounds for the petition were that she, a girl barely 16 years of age, was deceived by the man to whom she was engaged; that she understood that the ceremony at the registry office was only one of betrothal; and that she was so dazed at the time as to be rendered incapable of knowing what was being enacted. The "husband" swore that after the marriage he cohabited with his wife for three months. This was denied by the petitioner and her relatives and her case was further supported by two medical men who declared her to be *virgo intacta*. The Queen's Proctor's intervention was dismissed and the decree was made absolute. At the trial recently conducted at the Central Criminal Court before Mr. Justice BRUCE, LOUISE MASSET, a single woman, was convicted and sentenced to death for the murder of her illegitimate boy aged three and a half years. The crime was a singularly cold-blooded one. It seems to have been carried out with premeditation and firm resolve. The motive—which the judge in his summing up remarked must be utterly inadequate to the crime—was apparently the desire to be freed from an incumbrance in consequence of a *liaison* which the prisoner had contracted with a man who was not the father of her child.

It was high time that the crusade which is now being waged against the public scandal of so-called "massage houses" was set in motion and we cannot congratulate the vestries upon their promptitude. Several convictions have been obtained on prosecution in the criminal courts of persons carrying on nefarious practices under the guise of quasi-medical institutions. A man named Wilson received the exemplary punishment of 12 months' imprisonment for the offence.

We have had to record a large number of deaths under anæsthetics. No less than thirteen fatal cases incidental to the administration of chloroform have been mentioned in our columns. In some of these the result appeared to be due to conditions necessitating operation under anæsthesia rather than to the direct effect of the drug. At the same time we found ample material for insisting on the most extreme caution being exercised whilst patients are being rendered insensible. One case of death from chloroform happened at a dental hospital, and we had occasion to urge the desirability of the employment of nitrous oxide in dental practice except where prolonged anæsthesia is required. At King's College Hospital a man died from suffocation by large masses of meat passing into the air-passages whilst he was taking the A.C.E. mixture. At the Paddington Infirmary ether was administered preparatory to an operation for stricture of the urethra. The patient who suffered from *petit mal* seems to have had an attack whilst the anæsthetic was being given. Death was due to cardiac failure. It is well known that chloroform vapour is liable to decompose in the presence of gas flames, chloroform vapour being decomposed into carbonyl chloride and water. Carbonyl chloride being set free acts probably as a toxic agent as well as a local irritant to the air-passages, causing spasm of the glottis. We have referred to several authenticated cases where serious symptoms have arisen from the inhalation of the compound and in one instance the victim succumbed on the second day.

An unfortunate accident happened at Woolwich whereby a life was sacrificed. Some coal-gas escaped from an apartment beneath a bedroom. The gas bracket was of the dangerous old-fashioned type fitted with a water seal. The water had evaporated and thus the gas was no longer confined.

Two noteworthy instances of strychnine poisoning have been recorded, one accidental and the other homicidal. Mr. J. DICK, a medical man residing at Eastbourne, dispensed

for a patient a mixture of iron, chiretta, and what he believed to be chloroform water. The patient complained of the medicine making her ill, whereupon Mr. DICK, to re-assure her, swallowed a portion. Shortly afterwards he became dangerously ill and eventually died. It appears that solution of strychnia (two drachms) had been put into the bottle in mistake for the chloroform water.

In the second case a farm labourer administered to his wife some strychnine and corrosive sublimate which he added to a bottle of medicine supplied by a medical man. The bottle had been thrown away, but though broken it retained a considerable quantity of the original contents. The body was exhumed and on analysis was found to contain strychnine. The man was convicted and hanged.

A painful mischance led to the death from carbolic acid poisoning of the Rev. Dr. A. H. K. BOYD. A bottle containing some lotion was placed by the side of one in which was a sleeping draught and by accident the former was taken for the latter.

In the *Gazette Médicale du Centre* is to be found a case in which recovery took place after swallowing 370 grains of perchloride of mercury. The chief symptoms were complete anuria and diarrhœa. By way of treatment ipecacuanha was given as an emetic and three and three-quarter grains of caffeine as a stimulant. The stomach was washed out with 35 pints of water charged with albumin and flour.

In the Journal of the American Medical Association Dr. J. P. LORD has reported a case in which chronic plumbism was mistaken for appendicitis. In another instance the reverse happened, and Dr. LE GENDRE has shown that chronic lead-poisoning may cause appendicitis.

A notable example of phosphorus poisoning was that in which a girl named MARY ANN ANSELL having insured her insane sister's life sent to her at the asylum in which she was confined a cake in which she had put rat-poison. The analysis of the viscera did not reveal the presence of phosphorus, but the post-mortem appearances were characteristic. The prisoner was tried, convicted, and hanged.

In the *New York Medical Journal* was recorded a case of acute alcoholic poisoning. A boy, aged six years, drank about three ounces of whisky and died in 18 hours. He had a temperature of 105·3° F. Chronic spasms supervened.

At Aldershot 40 persons were affected with tyro-toxicon (diazo-benzine) poisoning due to the ingestion of some cheese and three of them died. The symptoms generally were gastro-intestinal irritation, high fever, muscular and abdominal pains, and jaundice.

Dental Surgery and the Practice of Dentistry.

During the past year there have been many signs that the problems awaiting solution in dental surgery are being attacked in a more scientific manner than heretofore. This is encouraging, and a distinctly hopeful sign of the future is that year by year more men are added to the ranks of the dental profession who have received a sound medical training. That the dental profession has awakened to the importance of scientific research is shown by the institution of "grants in aid" by the British Dental Association for those carrying on original investigation. A similar proposal is, we believe, at the present moment under the consideration of another of the prominent dental societies.

One of the most interesting contributions of the year was the excellent paper read by Professor F. T. PAUL before the Odontological Society on the Development of Dentine. The conclusion he arrived at was practically the same as that proposed by Mr. J. H. MUMMERY—namely, that in all essentials bone and dentine matrix are developed on similar lines.

A suggestive paper has also appeared from the pen of Mr. F. J. BENNETT in which the various views of calcification of the teeth were ably criticised. Such papers do good by pointing out vulnerable points in accepted theories. The study of the micro-organisms of the mouth has attracted much attention both in this country and America and Mr. KENNETH GOADBY has contributed two valuable papers during the year. In the one read before the Odontological Society he showed that the micro-organisms in the deeper layers of carious dentine are in far less quantity and variety than in the superficial layers. In the deepest layers he found but two varieties, one the streptococcus brevis and the other an organism hitherto unidentified and for which he suggested the name bacillus necrodentalis. Both these organisms are rapid acid producers, are capable of anaerobic existence, and were obtained from the layers of dentine left after the removal of the softened parts—namely, the layers often left in excavating a cavity. Dr. KORNER HALLI has published an instructive paper on the Relation of Diseases of the Teeth to Chronic Swellings of the Lymphatic Glands, and Mr. J. G. TURNER has contributed an interesting communication on Some of the Rarer Forms of Abscesses connected with the Teeth.

Another paper to which attention must be drawn was that by Dr. WILLIAM HUNTER on the Etiology of Dental to General Diseases. The author gave an excellent *résumé* of the present knowledge of the subject and recorded some interesting cases where affections of the stomach were distinctly traceable to infection from suppurating roots in the mouth.

In the practice of dentistry comparatively little progress has been made. A fair amount of attention has been bestowed upon the treatment of irregularities and a paper on the Early Treatment of Crowded Mouths has appeared in the *Dental Record*.

The use of x rays for diagnostic purposes has been more extensively used and especially in connexion with irregularities of the teeth.

The dental schools have all made satisfactory progress and some of them have undertaken the mechanical training of dentists. This is a good sign and means in the near future the natural death of mechanical apprenticeship. The training obtained by a student at a dental school will undoubtedly be broader and more satisfactory than with a private practitioner.

Unfortunately, chloroform still seems to be used in dental practice and more than one death has to be recorded due to the use of this agent. Nitrous oxide in combination with oxygen has been more extensively used and methods for prolonging nitrous oxide anæsthesia have continued to attract attention.

Several new works have been published. Dr. TALBOT of America has contributed a valuable monograph on Interstitial Gingivitis (pyorrhœa alveolaris). Dr. H. S. NASH has also published a book on the same subject. A second edition of Mr. HOPEWELL SMITH'S excellent work on Dental Microscopy has appeared, and Dr. OTTOLENGUI'S work on "Methods of Filling Teeth" has also reached a second edition. A valuable little volume entitled "Notes on Dental Anatomy" must be mentioned as well as a small treatise on the "Hygiene of the Mouth" by Mr. DENISON PEDLEY. Another new work to record is one by Dr. F. J. GORGAS on Dental Materia Medica and Therapeutics.

The death-roll has been unusually large. Mr. ANDREW WILSON, who passed away during the early part of the year, had won a high reputation as a comparative anatomist, and Mr. BOWMAN MACLEOD was one of the most prominent members of the profession in Scotland, where his death will be keenly felt. Others whose deaths we have to record are Mr. ASHLEY GIBBINGS of London, Mr. J. F. KEKWICK of Carlisle, and Mr. MCADAM of Hereford. In America Dr. W. G. BONWILL has passed away; his ingenuity in

devising instruments gained for him a world-wide reputation and he has left a gap which will not be easily filled.

Biology and Physiology.

The numerous journals that are devoted to the subdivisions of this great department of human knowledge sufficiently attest the interest that is taken in it by the philosophers of every civilised country. At the same time they greatly increase the difficulty of giving even the most succinct statement of the advances that are daily in progress. Fifty years ago Professor SHARPEY was able to say that he did not believe that any important article in English, French, or German was published in the course of the year which he had not carefully read. It may be doubted whether any professor would admit that he had perused a tithe of the memoirs and papers that have been presented to societies and learned bodies during the past year. To SHARPEY'S modest triplet of languages the earnest worker who is desirous of ascertaining that his researches have not been anticipated must examine the scientific literature of Italy, Holland, Spain, Russia, and last but by no means least, Japan.

In this country two physiologists of name and fame have rightly received from the Queen recognition of their long continued and very valuable labours. JOHN BURDON SANDERSON, for many years the Jodrell Professor at University College, and now the Regius Professor of Medicine in the University of Oxford has had the honour of a Baronetcy conferred upon him; and MICHAEL FOSTER the founder of the thriving School of Physiology at Cambridge which has supplied young and able physiologists to many other centres of learning has been made a K.C.B., honours which have given quite as much pleasure to their numerous friends and pupils in all parts of the world as to themselves, and which it may be hoped they will long live to enjoy.

The Fourth International Physiological Congress was held in the autumn at Cambridge under the Presidentship of Sir MICHAEL FOSTER, and the proceedings have been collected and edited by Dr. LEONARD HILL. They appear as a supplement to the twenty-third volume of the *Journal of Physiology*. Nearly a hundred papers were sent in and more than a hundred members of all nationalities attended the meeting. There was a large exhibition of physiological apparatus. Sir MICHAEL FOSTER also delivered the Presidential address at the annual meeting of the British Association for the Advancement of Science, which met at Dover, taking for his subject the Growth of Science and its Lessons.

Improvements are in constant progress in the construction of the microscope, assisting in one way or another the labours of the histologist. Thus a new coarse and fine adjustment has been devised by Mr. KEITH LUCAS, a new method of effecting fine adjustment by Mr. AGAR BAUGH, an arrangement for colour illumination by Mr. J. RHEINBERG, several new microtomes, one or two of which are especially adapted for cutting flat sections of large objects like the brain, a new and simplified Abbé camera, and arrangements for the photographic reproduction of specimens. Then several new stains have been proposed, or modifications of old ones, such as Dr. J. S. BOLTON'S method of the Weigert-Pal process. Miss JORDAN and Mr. NOACK have each devised a useful apparatus for "orientating" microscopic objects. The limitations of space preclude the mention of more than a few of the numerous contributions to biological science. Amongst these reference may be made to the curious observation made by Professor G. PACINOTTI and Professor VON PORCELLI of the Pathological Laboratory of the University of Camerius, Italy, that the Becquerel rays, which are those emitted by recently pulverised uranium previously exposed to the solar rays, with a temperature of 35° to 44° C., exert a fatal action on moist bacteria in the relatively short period of from three to 24 hours.

A communication by Mr. J. BEARD which appeared in our pages at an early period of this year showed that the first leucocytes take their origin from the epithelial cells of the thymus and that this organ is therefore to be regarded as the parent source of the leucocytes of the body of the adult. The development of the blood corpuscles in man from a very early period has been followed by Dr. ENGEL. The influence of gravity on the circulation has been the subject of experiment by Dr. LEONARD HILL, who finds that man with several other animals possesses great powers of resistance to the action of gravity, partly owing to the high development of the vaso-motor system and partly to the pressure exerted by the skin, the muscular walls of the abdomen, and the strong aponeuroses of the skeletal muscles on the vessels. Some remarkable features of the capillaries of the heart not hitherto noticed have been described and illustrated by Dr. ARTHUR V. MEIGS of Pennsylvania. In the first place they are of unusually large size, indicating an abundant supply of blood that has just undergone aeration, and in the second place they may be shown to penetrate the striated muscle fibres in the adult, though they do not occupy that position in the early stages of development.

Dr. PAVY has continued his researches to ascertain the destination of the carbohydrates in the animal economy by an examination of the effects on the blood and urine of the intravenous and subcutaneous injection of various forms of sugar, including saccharose, maltose, lactose, galactose, lævulose, dextrose, and glycogen, the animal employed being in every instance the rabbit. Several of these sugars he found to be speedily eliminated from the system by the urine. Dextrose, which is normally but not exclusively present in the blood, and speaking generally those sugars which ferment with yeast, are to a greater or less extent applied or used up in the body. The subcutaneous introduction of large doses of sugar or even of small doses frequently repeated were found by JULIUS VON KÓSSA to produce such serious anatomical and pathological changes, amongst which gastric catarrh and polyuria were of common occurrence, that they may be regarded as toxic agents and they seem to lead to the disintegration of the proteids of the body which is in harmony with the muscular weakness and atrophy experienced by diabetic patients.

The anatomical features of the liver have been the subject of discussion at the meetings of the Anatomical Society of Great Britain and Ireland, Mr. CECIL H. LEAF exhibiting specimens showing the lobe, sometimes named Riedel's lobe, which he held to be only an accidental prolongation of the anterior margin of the liver in the vicinity of the tenth costal cartilage; Mr. A. KEITH adducing evidence to prove that the form of the liver in man and the higher primates is adaptative to the upright posture; and Professor ARTHUR THOMSON describing various minor fissures on the inferior surface, which are well represented in the gorilla. Mr. R. H. BURNE has described and depicted a very curious hepatic biliary plexus in the otter, which seems to be unique amongst mammals. The Viennese chemist, ADOLF JOLLES has been successful in isolating bilirubin, which he finds, in opposition to the statements generally made, to exhibit no absorption striæ, nor are any to be observed in alkaline solutions of biliverdin. The terminal product of the oxidation of bilirubin is bilixanthin which contains three more atoms of oxygen than bilirubin. The numerous experiments of BARBÈRA on the elimination of bile in dogs after the ingestion of various kinds of foods, show that there is a considerable and persistent increase in the flow of bile from a biliary fistula after the ingestion of a meat diet, a moderate but very persistent increase after fat food, and a very slight and quickly ceasing increase after the use of the carbo-hydrates.

The estimation of glycogen is the subject of a long article by E. PFLÜGER, which he has published in his own Archives. The proteolytic action of the pancreatic juice has been the subject of experiment by Mr. B. K. RACHFORD, who finds that whilst this action is promoted by moderately increased alkalinity it is not so materially impaired, as has been supposed, by the addition of an acid, even when this is sufficient to reduce the normal alkalinity by one half.

A large number of observations and experiments have been made on the abdominal viscera. It is of great importance in the investigation and diagnosis of obscure diseases of this region that the position and relations of the several organs should be accurately known. The section of frozen bodies supplied valuable information on these points which has been recently supplemented by the painstaking topographical measurements of Professor CHRISTOPHER ADDISON of Sheffield, effected by transfixion with pins and subsequent dissection. Two kinds of movements of the small intestine have been distinguished by Messrs. BAYLISS and STARLING one of which they consider is rhythmic and is of myogenic origin whilst the other is peristaltic and is to be regarded as a series of true coördinated reflexes the relations of which to the splanchnic and vagus nerves these observers have taken much pains to investigate. According to Dr. J. LE MARE BUNCH the splanchnic nerves contain both vaso-constrictor and vaso-dilator nerves which are distributed to the vessels of the intestines. The nerves distributed to the pelvic viscera have been carefully dissected and described by Dr. N. BISHOP HARMAN of St. John's College, Cambridge, under the collective name of the pelvic splanchnic nerve. Stimulation of the medulla oblongata or of the roots of the vagus has been found by Dr. BOTAZZI, experimenting on the toad, to be followed by contraction of the longitudinal fibres of the œsophagus and to raise their tonus. Stimulation of the sympathetic nerve gives rise to a relatively rapid contraction of the œsophageal muscle which, however, is not followed by any increase of tonus. MM. D. COURTADE and J. F. GUYON have found that stimulation of the sympathetic cord arrests all peristaltic movements of the longitudinal fibres of the small intestine, whilst it occasions a slow peristaltic contraction of the circular fibres equivalent to an increase of tonus. Stimulation of the vagus causes sudden and repeated contraction of both sets of fibres, the longitudinal contracting first and then relaxing when the circular fibres contract in their turn. Professor LANGLEY has effected the union of the vagus and sympathetic nerves after section of each and has shown that the nerve fibres of the vagus unite with those of the sympathetic and discharge the same functions as the sympathetic did before the section. RUDOLF HÖBER, experimenting on the process of absorption in the small intestine, has arrived at the conclusion that the diffusibility of salts determines their absorbability, and that in the process of absorption of saline solutions the cells play a relatively unimportant part, which is in accordance with the statement of HAMBERGER that absorption from the intestine of a dead animal is nearly the same as that in the living animal.

Excellent addresses were delivered by Professor J. N. LANGLEY to the Physiological Section of the British Association for the Advancement of Science, who discussed the general relations of the motor nerves to the tissues of the body, and by Professor J. J. CHARLES in the Section of Anatomy and Physiology of the British Medical Association, which met at Portsmouth, who gave at considerable length and in a very interesting manner the recent advances that have been made in physiology. Dr. P. WEISS has demonstrated by experiments on frogs that slight tension diminishes the excitability of nerve, whilst it increases that of muscle. By means of WALLER'S degeneration method Professor SCHÄFER, who has left University College, London, to which he has been so long attached as a highly esteemed teacher, to succeed Professor RUTHERFORD in the great school of Edinburgh, has demonstrated the probability that CLARKE'S column in the spinal cord gives origin not only to the dorsal cerebellar tract but also to GOWERS'S or the ventral cerebellar tract. The experiments of Mr. B. MOORE and Mr. H. W. REYNOLDS show that nerve impulses are propagated through the ganglia of the posterior roots of the spinal nerves at about the normal rate for nerve-fibre, or, in other words, that there is no appreciable delay caused by the interposed nerve-cell. Researches undertaken by OTTO WEISS have led him to the conclusion that nerves present no differences in their excitability in different parts of their course. Allusion only can be made to the thoughtful papers of Mr. A. F. DIXON on the Sensory Distribution of the Facial Nerve, showing it to be that of a typical branchial nerve, of Professor E. EWALD, who advances a new theory of hearing, and to the interesting investigation by Dr. GUILLERY of Cologne on the sense of form.

The popular impression that the blind possess a more acute sensibility for tactile impressions is not supported by the numerous and carefully made observations of Professor GREISBACH of Basle. The tips of the fingers of those who see are more sensitive than those of the blind. There is no difference between them in regard to the senses of hearing and smell. Those who can see can work longer and to better effect than the blind. An addition to the proteids in human milk has been made by WRÓBLEWSKI who by the addition of common salt, ammonium sulphate, or magnesium sulphate to the lye remaining after the precipitation of casein has obtained an albuminous substance to which he has given the name of "opalisin." It exists but in much smaller quantities in the milk of the cow. Dr. J. WEISS from an extensive series of experiments finds that fruit taken in moderate quantities causes a considerable reduction in the amount of uric acid eliminated by the urine whilst the quantity of hippuric acid is increased, the increase of this acid being due to the glucic acid that is contained in fruit. Professor J. ROSE BRADFORD has shown that nearly two-thirds of the total weight of the kidney may be removed from the body in dogs not only without fatal results but with a permanent increase in the quantity of urine discharged. There is, however, no considerable increase in the amount of urea excreted although the amount of nitrogenous extractives in the blood and tissues, and especially in the muscles, is greatly increased. A very elaborate polygraphic registering apparatus with reversible movement for the reception of graphic curves with dry and wet styles on white or smoked paper and for any length of time has been constructed by M. ROUSSY and has been presented by him to the Société de Biologie of Paris. One of the most interesting observations that has been made in the domain of Botany is that by Professor S. NAWASCHIN, which has been corroborated by M. L. GUIGNARD and by Miss ETHEL SARGANT. It relates to the mode of impregnation in Lilium, and brings the higher phanerogamic in relation with the higher cryptogamic mode of impregnation, for the two nuclei of the pollen tube which are regarded as antherozoids in lilium enter the embryo sac, assume a cylindrical or fusiform shape, and present one or two coils. Of these two nuclei one unites with the oosphere and the other with one of the polar nuclei. Professor G. MASINI finds that the aqueous and the glycerine extract of the tonsils when injected into the ear of rabbits causes an increase of the blood pressure and a slight degree of myosis. The effects seemed to resemble those of strychnia. Urea has been the subject of experiment by various observers. Dr. SCHÖRNDORFF finds that the proportion of urea in the blood of man on mixed diet is 0·0611 per cent. and the quantity is nearly the same in the milk of woman. He has also satisfied himself that normal mammalian muscle contains urea. We are indebted to Professor G. N. STEWART and Dr. TORALD

SOLLMANN for an account of an elaborate research which they have made on the proteids of muscle, in the course of which they show that the method of fractional heat precipitation can be usefully employed in the quantitative investigation of the muscle proteids, and they find that there exist in dead muscle two proteids, a true globulin, paramyosinogen, coagulating at from 45° to 50° C., and an atypical globulin, myosinogen, coagulating at from 50° to 65° C.; both pass readily into an insoluble modification which is myosin. This change is in relation to the supervention of rigor mortis. The resisting power of muscles to rupture has been investigated by Mr. J. CARVALLO and Mr. G. WEISS, and their experiments show that two muscles of equal transverse sectional area may rupture under very different weighting, whence it follows that muscles are not comparable *inter se*. In embryology perhaps the most interesting researches are those of M. Y. DELAGE and M. ALFRED GIARD, which have been carried on upon the lines of those of BOVERI in 1895. M. BOVERI showed that the entry of a spermatozoid into the fragment of an ovum of a sea urchin deprived of its nucleus might yet lead to the development of an embryo differing only in size from the normally developed larva and that it was even possible to effect the development of a similar fragment by the introduction of a spermatozoid of another species. M. DELAGE has observed analogous phenomena in an annelid, the Lanice conchylega, and in a mollusk, the Dentalium. He has applied the term "merogony" to this process. M. GIARD regards it as analogous to parthenogenesis. The sexual differences of the fœtal pelvis, which have hitherto been ignored or have been considered to be slight and unimportant, have been carefully studied by Professor ARTHUR THOMSON of Oxford who has shown that they are as well defined as in the adult.

Among the more important treatises that have been published are SCHÄFER'S "Text-book of Physiology," RICHET'S "Dictionnaire de Physiologie," VERWORN'S "General Physiology," EMMA BILSTEIN'S "Translation of Stöhr's Text-book of Histology," and HALE'S "Translation of Edinger's Anatomy of the Central Nervous System."

Anæsthetics.

Although no new anæsthetic has been produced during the past year a considerable increase in the literature of the subject has to be recorded. It deals with various, and in some cases important, investigations into the actions of the anæsthetic bodies at present in use, the methods of avoiding recognised dangers, as well as improvements in the methods of producing anæsthesia. Ethyl chloride, an anæsthetic introduced by NUNNELEY and SNOW and employed by Sir B. W. RICHARDSON and little used owing to its great volatility, has been recently revived in VON HACKER'S clinic at Innsbruck by WIESNER.[1] His experience from 400 cases is summed up in favour of this anæsthetic. An induction period of from one to two minutes, with little excitement except in alcoholic subjects, was followed by placid anæsthesia with no circulatory or respiratory disturbance and a rapid recovery without after-effects. Muscular relaxation, however, was absent and during long operations it was difficult to prevent a return to consciousness. Of course, WIESNER'S cases are so few that we must not take his conclusions too seriously. Of SCHLEICH'S solutions (sulphuric ether, petroleum ether, and chloroform) we find many observers have during the past year had much to say. The theory which SCHLEICH advanced was that an anæsthetic with a low boiling point failed owing to its extreme volatility and was dangerous owing to its tendency to over-distend the air-cells of the lungs. As chloroform has a comparatively high boiling point it, he argued, possesses perils, since it tends to accumulate in the lungs rather than to evaporate from their surfaces. This would happen most in prolonged anæsthesia, when the body temperature is depressed. His solutions are intended to give an ideal anæsthetic which will readily produce anæsthesia and rapidly leave the patient's tissues and so produce a minimal incidence of danger during and after narcosis. In a discussion upon the subject[2] it was pointed out quite justly that the solutions are mechanical mixtures and that no definite boiling points, such as SCHLEICH claims for them, can be obtained. In his report Dr. R. M. STONE[3] gives a most favourable account of his experience with SCHLEICH'S No. 3 solution (B.P. ? 42° C.). The severe strictures of Dr. RODMAN, which were the result of his experience of 700 cases, are, according to Dr. STONE, unjust in that the wrong form of inhaler was employed and the anæsthetic was given too freely at first. While the former observer found SCHLEICH'S solution possessed all the drawbacks of ether and chloroform, the latter, using a metal mask lined with Japanese bibulous paper with a pneumatic rim in conjunction with the Overholt dropper, has met with no dangers or unpleasant after-effects. Possibly his results are due to the relatively smaller quantity of the anæsthetic employed (two and a quarter ounces per hour). The name of SCHLEICH suggests the great activity which has been displayed in the field of local anæsthesia. The infiltration method is but little known in this country, although Mr. A. E. BARKER has in our columns[4] referred to it favourably, having used it for some time in his practice. It has been very extensively employed abroad. To SCHLEICH and RECLUS is due the merit of popularising the use of minimal quantities of cocaine and similar bodies by injecting high dilutions in saline until a local anæsthetic œdema is produced. Dr. BRAUN, working with Dr. HEINZ,[5] made some extensive experiments with various anæsthetics. Discarding the morphine from SCHLEICH'S solution BRAUN replaced the cocaine by eucaine β, using 1 part in 1000 of normal saline. A special syringe was made for the method. The elaborate experiments undertaken by SCHLEICH and by BRAUN and HEINZ[6] to show the way in which the solutions act upon the tissues constitute a brilliant piece of work and well repay careful study. While the most extensive operations have been undertaken under this infiltration method it certainly has limitations which, as pointed out by Dr. ALEXANDER JOHNSON[7] (New York) and others, will probably be better recognised alike by surgeons and patients as our experience becomes more extended. As most observers admit, operations under local anæsthesia by the infiltration method are not painless. They vary in the degree of pain inflicted, the actual infiltration being very unpleasant to many and the tissues burning for some hours afterwards. Faintness, vomiting, and shock are also in many cases reported as being severe, so that Dr. JOHNSON urges limitation of this method to cases in which general anæsthesia presents grave dangers or is actually impossible. He also suggests that from the surgeon's point of view the œdema makes the tissues difficult to manipulate, while the consciousness that his procedures are causing pain—how much he has no accurate means of judging—prevents him from giving undivided attention to surgical technique. A further development of this method consists in the attempt, successfully made by some surgeons, to obtain anæsthesia by injecting weak solutions of cocaine into the perineural sheath of nerves. BIER,[8] indeed, has carried the procedure still

[1] Wiener Medicinische Wochenschrift, July 8th, 1899

[2] American Medical Association, Annual Meeting at Columbus, June 6th to 9th, 1899.

[3] Journal of the American Medical Association, Nov. 4th, 1899.

[4] THE LANCET, Feb. 4th, 1899, p. 282.

[5] Sammlung Klinischer Vorträge, v. Von Volkmann, No. 228; also Experimentelle Untersuchungen und Erfahrungen über Infiltrations-Anästhesie, Verhandlungen der Deutschen Gesellschaft für Chirurgie. Berlin, 1898.

[6] Schmerzlose Operationen, Berlin, 1899

[7] New York Medical Record, June 10th, 1899.

[8] Deutsche Zeitschrift für Chirurgie, vol. li., pp. 3 and

further by reviving the plan proposed and practised by LEONARD CORNING, an American physician, of injecting cocaine between the spinous processes. BIER first infiltrates the tissues over the lumbar spine and then injects the sac of the spinal cord with dilute solutions of cocaine. He used from one-tenth to one-sixth of a grain and produced analgesia below the seat of puncture. In the comparatively few cases quoted by BIER but few severe after-effects were recorded, although it is obvious that the most precise attention to asepsis could only free the patients from grave peril. BIER appears to be unaware of CORNING'S observations which were published in 1885. Escape of cerebro-spinal fluid when it occurred caused, or was believed to have caused, the sickness, faintness, and giddiness which appeared in some cases. One patient out of the six operated on had no after-effects; the others vomited, had severe headache, and subcutaneous hæmorrhages with tenderness over the lumbar puncture. TRZEBICKY,[9] on the other hand, records 181 operations performed under SCHLEICH'S infiltration method with satisfactory results, as only in five cases was he obliged to give chloroform owing to the pain experienced by the patients.

The success following the use of oxygen with nitrous oxide gas, popularised in Germany by HILLISCHER under the fanciful name of "Schlafgas," has led to its extension to longer operations than those of dentistry without uniform success, as the patients are liable to muscular rigidity and even to more grave conditions.[10] One case, indeed, has been recorded in which this mixture was followed by the use of chloroform and resulted fatally,[11] but it is not easy to see definitely which anæsthetic was most at fault.[12] Dr. G. B. FLUX has in our pages introduced a valuable method of using nitrous oxide. He relies upon the weight of the gas, allowing it to drop into a face-piece open above but closely fitting the face and neck below. This "open" method robs nitrous oxide inhalation of its horror to many timid persons—a face-piece fitted closely to and covering the mouth and nose. Upon the relative merits of mixtures of air and nitrous oxide and of oxygen and nitrous oxide Dr. F. W. HEWITT[13] has instituted some experiments which induce him to re-affirm his views that the latter combination possesses many marked advantages. J. GEPPERT[14] has introduced into the surgical clinic of Bonn what appears to be a development of CLOVER'S plan carried out with somewhat cumbersome chloroform apparatus for giving chloroform in definite volumetric doses. GEPPERT has a gasometer filled with air. There is a glass rod which is fixed in the upper lid and passes down with it, and by entering a glass vessel containing chloroform displaces the latter. The narcotic runs into a receiver and is volatilised over a bath at from 90° to 100° C. The vapour mixed with the air is conducted by tubing to the face-piece and inhaled. By arranging the diameters of the cylinder and glass rod the proportion of vapour to air is easily arranged. In the 400 cases reported the arrangement appears to have answered well and it certainly is a step forward to find the question of maintaining volumetric relations between chloroform vapour and air seriously considered and an attempt made to counteract the stereotyped haphazard methods so long in vogue. Much work has been done upon the chloroform problem, but unhappily the death-roll shows no sign of material decrease. LEHMANN makes the curious observation that during the induction of narcosis patients who develop dangerous symptoms always lie with partially open eyelids. Dealing with measures for the resuscitation after an overdose of chloroform ROCKWELL of New York makes the valuable suggestion that only faradaic currents should be used since they do not depress the heart as do galvanic currents.

HERZOG[15] re-asserts the value of LABORDE'S method of tongue traction which he has seen to succeed after 45 minutes. His experiments upon dogs appear to bear out LABORDE'S clinical experience. He believes the proximity of the centres for respiration and tongue movements accounts for the stimulation of the former.

SCHÄFER and OLIVER'S experiments upon the powerful stimulation of vaso-motor action by suprarenal extract have been supplemented by those of WALLACE and MOGT who, working with the dog's heart, found that suprarenal extract stimulates the vagus centre and the heart muscle. When the vagus action is lost the heart-beats increase in frequency and force and a rise in systemic blood-pressure occurs.

VELICH'S work[16] upon the same subject supports their views and adds what is particularly valuable the evidence of the constricting power suprarenal extract possesses upon the small vessels of the abdominal cavity. Hence, as SCHÄFER has said, it is probably the most powerful antidote we have to the vaso-depressant action of chloroform. MANKOWSKI'S clinical experience supports these physiological conclusions. SCHENK[17] reports an extremely interesting case of a woman who inhaled chloroform for half an hour and after three days died from heart failure and renal trouble. Her organs all showed the peculiar fatty change which THIEM and FISCHER have shown follows repeated and prolonged inhalation of chloroform. SCHENK made experiments on monkeys and dogs and found that the fatty change always occurred and took several days to disappear. These observations possess especial interest when read in association with the reputed acute dilatation of the heart occurring during and after the narcotisation by chloroform. Although few subjects have received more attention than that of albuminuria following anæsthetics little precise knowledge exists upon it. POPOFF[18] examined 140 cases with much care. He never saw permanent kidney mischief following ether inhalation; pre-existing albuminuria was increased by it, and in some cases albumin was found after it, but it was only present for a short time. POPOFF[19] differs wholly from THOMPSON and KEMP whose experiments led them to believe that ether caused more or less severe renal disablement, for he suggests that the phenomena are due solely to general vaso-motor disturbance and not to local kidney changes. The work of SCHIFF and KNOLL seems to support this contention, which has also the weight of WUNDERLICH'S authority. A thoughtful paper by Dr. HAMILTON FISH[20] urges the importance of an examination, not only of the general conditions, but also of the blood of the patient before he takes an anæsthetic. We cannot do more than point out that there is much in his view that, as most anæsthetics act upon and deprive the corpuscles of their relativity to the fixed cells of the tissues, it is not a matter of indifference whether or not there is leucocytosis or its defect, or a lower than the physiological standard of hæmoglobin in blood about to be acted upon by chloroform or ether. Whether his advice to take blood observations during the operation is a possibility seems doubtful, even if it is desirable. Several important communications have been published on the so-called post-anæsthetic paralysis. Dr. H. G. TURNEY[21] dealt very carefully with these conditions and in th main he agrees with MALLY[22] who contends that these palsies are in reality accidents occurring under, but in no sense causally

[9] Wiener Wochenschrift, No. 13.
[10] Proceedings of the Society of Anæsthetists, vol. ii., p. 171, a paper by Mr. B. Gardner on Nitrous Oxide and Oxygen.
[11] Ibid., a paper by Mr. A. Granville, p. 175.
[12] See also Ibid., p. 140.
[13] Transactions of the Royal Medical and Chirurgical Society, vol. lxxxii., p. 163.
[14] Deutsche Medicinische Wochenschrift, Nos. 27, 28, and 29.
[15] Deutsche Zeitschrift für Chirurgie, vol. xlvii., pp 5 and 6.
[16] Wiener Medicinische Wochenschrift, No. 26.
[17] Centralblatt für Chirurgie, No. 19.
[18] Annals of Gynæcology and Pediatry, April, 1899.
[19] Medical Record, Sept. 3rd, 1898.
[20] Annals of Surgery, July, 1899, p. 79.
[21] Proceedings of the Society of Anæsthetists, vol. ii., p. 193.
[22] Revue de Chirurgie, July 10th, 1899.

due to, the anæsthetic employed. LESZYNSKY has taken the same position. It is possible, however, as has been pointed out, that members of the alcoholic series do render nervous tissues rather more prone to the effects of traumatism when a patient is under their influence. Acoin, a new local anæsthetic, has been already dealt with in our columns by Mr. BRUDENELL CARTER, while holocain, now a well-known substance, has during the past 12 months received some trials and a good deal of support. The year as a whole has evinced that the profession is keenly on the look-out for the coming of the ideal anæsthetic and has meanwhile made no small efforts to perfect methods of using and to learn fresh truths about the old and tried members of the family of surgical narcotics.

Mirror of Hospital Practice.

During the last year we have been able to exhibit in the "Mirror of Hospital Practice" cases from the hospitals both of this country and of the colonies which illustrate the present condition of medicine and surgery. There is no subject that excites more interest nowadays than the value of the antitoxic sera. In some cases, as in the case of diphtheria, the usefulness of the antitoxin is generally acknowledged, but in most the therapeutic value is still undetermined. Especially is this true of anti-streptococcic serum. In the "Mirror" we have published the notes of seven cases in which this serum was employed. The first case was under the care of Mr. W. G. SPENCER and was one of acute pharyngitis followed by septicæmia. It was found on bacteriological examination to be due to streptococcus pyogenes. The symptoms were very severe, but recovery followed the injection of the anti-streptococcic serum. In the second case a periostitis of the first phalanx of a finger occurred in the course of an attack of typhoid fever. A very variable temperature and marked delirium were present, but all the symptoms improved rapidly after the first injection of the serum. Unfortunately, no bacteriological examination was made. In the third case, under Dr. LEONARD WILDE, a young man had severe tonsillitis and when the blood was examined many streptococci were present. Numerous injections of the serum were employed and its use was continued until the blood was found to be sterile, and ultimately the patient recovered. In all, 345 cubic centimetres of anti-streptococcic serum were injected. The fourth case was of especial interest because there was a double infection by streptococci and staphylococci; the former disappeared after many injections of anti-streptococcic serum, but death resulted from the staphylococci which had been unaffected by the injections. The next two cases were under the care of Dr. W. MURRELL and were cases of erysipelas. In each case improvement rapidly followed the injections and both recovered. The seventh case was under the care of Dr. T. B. GRIMSDALE and was one of puerperal septicæmia due to streptococci which were found in the blood. Under the anti-streptococcic treatment the streptococci disappeared from the blood and the patient recovered.

The first requisite for a scientific administration of the anti-streptococcic serum is a certainty that the streptococcus is present, and this can only be obtained by careful bacteriological examinations. If the fact of the presence in the blood of the streptococcus be not determined the anti-streptococcic serum may be administered to cases where this micrococcus is absent and the fatal ending would be recorded to the disadvantage of the serum; or, on the other hand, the case may be one where only toxic products have been absorbed—that is, sapræmia and not septicæmia—and the serum would be liable to be credited with a cure to which it had no just claim. Another difficulty confronts us in this matter; it has been shown that there are several distinct species of streptococci and a serum antagonistic to one variety may be innocuous to another. To overcome this difficulty attempts have been made to prepare an anti-streptococcic serum which shall be inimical to all the various forms of streptococci. Yet, in spite of the difficulties of the treatment, marked improvement has been noticed to follow the injections and to follow so closely that no doubt can be felt that the injections have been the cause of the improvement. In most cases the harmlessness of the injections is very noticeable. With care in the selection of cases very good results should follow the administration of anti-streptococcic serum.

Another antitoxin which has yet hardly found its true level is the anti-tetanic serum. Of the employment of this remedy we have been able to furnish several valuable instances; but in a disappointingly large proportion of them the cases proved fatal. It is now recognised that if the toxin has come in contact with the cells of the central nervous system it forms a compound with them which the antitoxin is unable to resolve, so that the parts of the nervous system already affected are not materially improved by the injection of the antitoxin, though any toxin still in the circulation is destroyed. The attempt to increase the power of the antitoxin by injecting it directly into the subdural space, as in a case under Mr. H. S. COLLIER, has been in part successful, yet the difficulty of administering an injection is enormously increased.

Few cases present more difficulties in diagnosis than abdominal injuries without external wound, and several very striking examples have appeared in the "Mirror." In one, under the care of Mr. W. J. WALSHAM, the small intestine was torn and was successfully sutured. In another case a mesenteric artery was ruptured and Mr. E. W. ROUGHTON tied it nine hours after the injury and the patient recovered.

Two well-marked instances of bradycardia have been recorded; in one the pulse-rate varied between 32 and 35 beats per minute and in the other there were only 26 or 28 heart beats per minute.

Idiopathic dilatation of the colon—that is, dilatation not due to any obstruction—is not common, and we published two examples of the condition which were under the care of Mr. J. R. LUNN. In one of them the circumference of the rectum measured 26 inches.

The inclusion of the vermiform appendix in the sac of an inguinal hernia is not rare; it is certainly very unusual to meet with it in a femoral hernia and of extreme rarity to find it the sole occupant of the sac. Two instances of this exceptional condition, however—one under the care of Mr. EDMUND OWEN and one under Mr. BATTLE—were reported, and other examples of the presence of the appendix in a hernial sac were also recorded.

We have published two cases of papillomatous cysts of the ovary under the care of Mr. PEARCE GOULD. In each of them the tendency to form papillomatous growths on neighbouring structures was well shown. The practical importance of the cases consists in the fact that these tumours are often mistaken for malignant growths and the surgeon refrains from removing a tumour which would readily come away. In each of Mr. GOULD'S cases removal was followed by complete restoration to health.

The Naval and Military Medical Services.

If the year 1898 had been an eventful one and crowded with incidents, some of which were historical and destined to have a far-reaching tendency, what can be said of the year 1899 which is now closing? The journals of Europe, America, and the East were heavy laden in 1898 with news of grave and varied import, such as the adoption of an altogether new departure on the part of the United States in connexion with the Spanish-American war policy; the termination of our own campaign on the North-West frontier of India, and the increased prevalence of plague in that country; the victories of the Anglo-Egyptian army in the

Soudan—at Atbara and Omdurman—under the present Lord KITCHENER, followed by the Fashoda complication with France; to say nothing of the explorations, fighting, and political difficulties in other parts of the African continent, as well as those at Crete and in China. The end of the year 1899 finds this country at war in South Africa in the biggest and most formidable campaign in which it has been engaged since that of the Crimea; and what a revolution has taken place in the interval in all that concerns our system and methods of warfare and in our very conceptions even of what is our national duty to the sick and wounded and the provision that must be made for their needs under the conditions entailed by modern systems of warfare! In everything connected with the hygiene, transport, field hospital service, surgical and medical equipment, and nursing and medical organisation generally, the progress has simply been immense and the nation is to be heartily congratulated on the fact. For many years past, but especially during the last few years, public feeling has been happily undergoing a great change in this respect, and the scant and beggarly way in which the sanitary and hospital services of naval or military expeditionary forces were formerly equipped would not be tolerated in the present day. What would have been regarded long ago as simply desirable for the British soldier's or sailor's comfort in time of war is now considered to be absolutely essential for the preservation of his health and efficiency and for his proper treatment and recovery when sick or wounded.

The recent victory won by Colonel WINGATE'S force over the Dervishes finally completes the work which Lord KITCHENER had already nearly accomplished in the Soudan. Not only has the KHALIFA been killed, but all his principal Emirs have also been slain or taken prisoners except OSMAN DIGNA, who, as usual, escaped. The loss on the Anglo-Egyptian side was trifling and the work of the medical service of that army was mainly bestowed upon the treatment of the sick and wounded of the KHALIFA'S defeated army. The situation in South Africa is, however, a far more serious affair and has imposed a strain upon this country which no other Power in the world could have successfully undertaken and maintained. This strain has fallen upon all and has brought grief and sorrow into the hearths and homes of a large number of households at this Christmastide. It has also severely tried, and is still trying, the medical service, but never before in the annals of this country or any other country have such efforts been made to bear the burden and, as we have already said, to provide for and relieve the sick and wounded by all that modern medical science and philanthropy can accomplish.

As regards the Royal Navy Medical Service the year 1899 opened with an opportune communication in the *Times* on "Naval Surgery" from a retired Inspector-General, R.N., dealing with the inadequate surgical and medical equipment provided for that service. But the subject had not escaped the attention of the Admiralty and naval medical authorities. A strong departmental Committee, as we were enabled to announce, was soon afterwards appointed to consider various matters which were capable of reform and improvement. In due time its report was published, giving an able and business-like statement of the whole case. The report contained a number of proposals and recommendations for bringing the Royal Navy Medical Service and its officers abreast with the progress of scientific medicine and hygiene and the surgical requirements of the present time by increasing the opportunities of naval medical officers generally for the practical study of their profession and by equipping them with those modern instruments and appliances necessary for the efficient performance of their professional duties. Very important reforms were recommended to be introduced into the service by the report in question, which was so reasonable and moderate in its tone as to carry conviction to the Lords Commissioners of the Admiralty. Things had, presumably for financial reasons, really been allowed to drift behindhand in these respects and we think that Sir HENRY NORBURY, the Director-General of the Royal Navy Medical Service, deserves much credit for his efforts to put them straight.

It will be remembered that a good deal of surprise and adverse comment was caused by the appointment of a Deputy-Inspector-General, R.N., to Haslar Hospital instead of an Inspector-General (of whom there were three available) to that post. An officer of the latter and higher rank had always previously held that appointment. We thought at the time that the First Lord of the Admiralty was ill-advised in the course he took in the matter, but Mr. GOSCHEN adhered to his decision for which he declared that he was personally solely responsible.

Considerable advance has been made in the study of tropical diseases and notably as to the rôle of the mosquito as the vehicle of the malarial parasite in which an officer of the Indian Medical Service (Major RONALD ROSS) has played a distinguished part. Much discussion arose in connexion with the establishment of a special school for the study of these diseases and the great clinical advantages which Netley offered in this respect received prominent notice and consideration, but it was ultimately decided that the school for this metropolis should be located at the Albert Docks, which has accordingly been done. A school of tropical medicine has been opened at Liverpool, and a malarial research expedition has not only been undertaken but has already accomplished some very promising scientific work.

One of the notable features of the year as far as the medical services were concerned was the address on surgery delivered at the annual meeting of the British Medical Association by Professor OGSTON, Surgeon-in-Ordinary to the QUEEN in Scotland and Regius Professor of Surgery in the University of Aberdeen. While we sympathised generally with the aim and object of that very outspoken address it must be confessed that, seeing the great efforts which the Government had been making to remove the legitimate complaints of army medical officers, its delivery at that particular time was somewhat inopportune, nor did the address sufficiently recognise the practical difficulties that had to be encountered and overcome in warfare, or the vast improvements which had actually taken place in the services in the practice of antiseptic surgery in the field, or the labours and practical experience of medical officers of the military and naval services. The address called forth, as might have been expected, an able and critical reply from a medical service point of view.

During the past year the question of the dairy farm and milk-supply at Aldershot came in for a good deal of objection and adverse criticism in the House of Commons, but the War Office was able to prove by a perfectly independent medical authority after due inquiry that the objections which had been raised were groundless.

The application of the system of having sanatoria established for our sick and convalescent soldiers at various suitable stations in this country has, we are glad to say, been more fully recognised and extended.

As regards India the duties of medical officers have been considerably increased by the continued presence of plague in that country. Enteric fever still continues to be the scourge of the young soldier and officer in India, notwithstanding all the efforts that are being made to control that disease. One of the notable features in the medical history of the year has been the introduction of inoculation against the disease among our soldiers serving in that country and among the troops proceeding on service to South Africa. Professor WRIGHT of Netley has been mainly instrumental in getting

this practice introduced and tried. It is too early to pronounce any definite judgment at present, but the success that has followed the application of this prophylactic measure is stated to have been considerable.

An important decision affecting the Indian Medical Service has been published to the effect that the principle of selection for the upper grades of that service will in future be more generally and rigidly applied.

Among the new departures connected with the present war in South Africa we must not forget to mention that several civilian hospital surgeons of eminence have been sent to and are now at the seat of war. We think this a wise and excellent measure, notwithstanding that we recognise that it will be extremely difficult, if not impossible, to ensure their presence when and where they are urgently wanted, and we have grave doubts whether, as regards abdominal or cranial surgery, the obstacles to successful operations will not frequently prove to be insurmountable. We do not for a moment believe that the regular military medical staff will have any objection to their presence in the field: on the contrary they will welcome their aid for consultation purposes and for special and exceptional cases of difficult surgery as a great and assured professional support.

We hope that we may legitimately credit THE LANCET with having striven to keep its readers *au courant* with the progress of the war in connexion with its medical history, hospital administration, and the provision for, and treatment of, the wounded. We have been enabled to publish some interesting and valuable articles from the theatre of war and the hospital at Wynberg, and notably one from Sir WILLIAM MAC CORMAC briefly dealing with the surgery of the war, the nature of the wounds, and the progress and treatment of the wounded. Sir WILLIAM MAC CORMAC, we may add, speaks in eulogistic terms of the Wynberg hospital and of all that he saw there.

Amidst the gloom surrounding the state of affairs in South Africa at the present time there is certainly one bright spot of which the medical profession may well feel proud. Never has the medical service acquitted itself better and never have medical officers exhibited greater bravery and devotion on the battlefield or done better work than they have done, and are still doing, in South Africa at this time.

Chemistry.

The record of chemical achievements during the year must be held to be somewhat dull compared with previous years. It cannot be doubted, however, that the workers in the field of chemical research have been as busy as ever but that no very striking issue has resulted. Speculations have been rife in recent years as to the anatomy of the molecule, and the problem is being vigorously attacked so as to elucidate not so much the composition as the constitution of matter. The cue in this direction will be most probably given by the study of organic compounds, the molecule being split up into definite groups, the architecture of the groups themselves having already in a great number of cases been determined.

The asymmetry of the carbon atom in explaining optical activity and the isomerism of optically active carbon compounds are examples of our increased knowledge of the constitution or architecture of molecules. If a compound contains an asymmetric carbon atom its existence can easily be conceived in two isomeric modifications, the one being an image of the other projected into space. This idea of the constitution of isomerides sprang from the classical experiment of PASTEUR in which he separated two oppositely optically active crystals from inactive racemic acid. Quite recently a paper was read at the Chemical Society on some experiments with certain optically active compounds in which it was shown that their behaviour with polarised light was due to the asymmetry of nitrogen. This discovery of preparing asymmetric nitrogen compounds is of the utmost importance and will throw considerable light on the valency of nitrogen in ammonium compounds.

An interesting phenomenon in connexion with the formation of crystals has been observed by Dr. WIECHMANN. Under the influence of sunlight it would appear that a solution of partially inverted sucrose was transformed into a crystalline solid. The action is long but perfectly definite, while it is important in exemplifying the power of light in bringing about chemical and physical changes. Last year we chronicled the interesting results which Dr. W. J. RUSSELL had obtained, in which it was shown that certain bodies are able in the dark to act on a photographic plate and produce a picture. Almost all bodies appear to have more or less this property. The latest contribution on this subject from Dr. RUSSELL points to peroxide of hydrogen as being the agent, and this explains why certain oils are particularly active. It would seem that all organic bodies capable of acting on the photographic plate are capable also of giving rise to the formation of hydrogen peroxide when they oxidise in moist air. That being so, the production of hydrogen peroxide must be constantly going on around us—a phenomenon which must have some important influence upon the air which we breathe and some possible effect in regard to its relation to health. If any announcement were exciting more than another it was that of the success of Professor DEWAR in reducing hydrogen to the state of solid, and this achievement has enabled him also to liquefy helion. It is probable therefore that soon the last element that remains to be solidified will eventually succumb under the highly abnormal physical conditions which Professor DEWAR is able to command with his splendid apparatus at the Royal Institution.

Solid hydrogen is described as a white froth-like mass like frozen foam. In appearance it is more like frozen water than frozen mercury, and other evidences remove the last doubt as to the possibility of solid hydrogen having a metallic character. The place of hydrogen in the classification of future text-books must therefore be amongst the non-metallic elements. Sir WILLIAM CROOKES, by a series of laborious "chemical fractionations," has separated without a doubt a new element which he has called "Victorium." This element is associated with yttrium, both being present in yttria earth. It differs in regard to its chemistry in many respects from yttrium. It gives a very distinct photographic phosphorescent spectrum, two characteristic lines occurring at that part of the spectrum corresponding with wave lengths of 3120 and 3117 respectively.

During the year our knowledge has not to any important extent been added to by the publication of further particulars of those newly-discovered elements of the air—namely, argon and neon and krypton. What further knowledge has been gained in regard to them only accentuates their inertness of character. Doubtless Professor RAMSAY is busily engaged in finding out more about these elements, and particularly upon the question as to whether they can be further resolved into still simpler compounds. At the meeting of the British Association, which was held this year in Dover in order to enable an exchange of courtesy and ideas between the French Association and our own, some interesting papers were read bearing mainly on bio-chemistry. First amongst these must be placed the remarkable address of Dr. HORACE T. BROWN, F.R.S., on the Fixation of Carbon by Plants. He cited experimental evidence of the enormous power of certain leaves of assimilating carbon dioxide. He admits, however, that the brilliant discoveries of recent years on the constitution and synthesis of the carbohydrates have not brought us sensibly nearer to an explanation of the first processes of the reduction of carbon dioxide in the living plant. When we have succeeded in finding some simple chemical means of fixing the initial products of the reduction of carbon dioxide then,

and then only, he says, may we hopefully look forward to reproducing in the laboratory the first stages of the great synthetic process of nature on which the continuance of all life depends. At the same meeting Sir W. THISELTON DYER showed that when the seeds of barley, vegetable marrow, mustard, and pea were immersed in liquid hydrogen —that is to say, at a temperature of 450° F. below freezing point—the seeds so treated showed no visible change and, far from being killed, they came out of the ordeal as fresh and bright as they were before and every single one germinated after being planted. This has led to some interesting speculations as to the nature of life or vitality. The cöoperation of organisms in producing definite products, a phenomenon known as symbiosis, was a subject introduced by Professor MARSHALL WARD. Subsequent papers drew attention to the conversion of starch into alcohol by means of the symbiotic existence of moulds with yeast. On the Continent this fact has been turned to advantage in the commercial production of alcohol.

The flow of synthetic products seems to have subsided to some extent, although during the year some valuable alkaloid substitutes have been brought to the notice of the profession through our columns. In regard to pure chemistry, however, it would appear that chemists have on the whole turned their attention to elementary problems rather than to building up complex bodies, which by their very complexity involve being distinguished by names of exceeding length. The journal of the Chemical Society frequently contains such names which extend right across the page of the publication. It is curious how some years ago elementary inorganic chemistry was abandoned as a field of research in favour of organic chemistry, but there is evidence of a decided return to the investigation of inorganic phenomena, and the work has already been attended with very interesting results. In many instances it has been shown that the interpretations which we have been content to place on certain apparently elementary reactions have admitted of a much wider meaning or a simpler meaning, as the case may be. Investigation in this direction may lead to important issues, so that ultimately we may arrive at a classification in the chemistry of the so-called inorganic elements comparable to the more exact classification of the compounds of carbon.

Public Health.

If the mortality rates for the first half of 1899 had been maintained we should have been able to give a satisfactory record for the year now about to close; for not only was the general mortality from all causes below the average up to the end of June, but that for the zymotic group as a whole and for nearly all the different diseases included in this somewhat heterogeneous group was also below the average. The exceptions were some slight increase in the "fever" death-rate, especially in the first quarter, when there was some special incidence of death in a number of towns, amongst which the Registrar-General specified one health resort—namely, Great Yarmouth; and a maintained increase in the diphtheria rate. With regard to diphtheria, we can only express our regret that such action as has been practicable by way of controlling an almost steady increase of this disease in England has led thus far to but little, if any, result. Indeed, efforts in this direction seem to be largely frustrated by the inability to prevent direct infection amongst young children, especially those attending our elementary schools, by reason of the prevalence amongst them of obscure and mild attacks of throat ailments which are in reality diphtheritic in type and are easily communicated from person to person. The mean annual death-rate per 1,000,000 living from diphtheria in England and Wales during the decennium 1881–90 was 163; that for the first seven years of the present decennium, on which the Registrar-General has reported, was no less than 253. But whilst diphtheria still maintained an excess in the third quarter of this year, the large increase in the general mortality which took place during that quarter was due to a different cause. It was associated with an increase in the zymotic group as a whole, and this notwithstanding the fact that the rates of death from most diseases in that group were below the average, and it was accompanied by an amount of infantile death which gave a rate of 255 deaths per 1000 of registered births as contrasted with an average of 179 for the corresponding quarter in antecedent years. The cause was diarrhœa, which during the quarter caused 25,952 deaths—namely, at a rate of 76 per cent. above the average for the previous 10 years. The incidence of this fatality was essentially on the infant population of our large towns and cities; and it is to be much regretted that notwithstanding the measures which are being adopted in a number of these towns to do away with the risk of emanations from a polluted soil, it still only needs the peculiar combination of meteorological conditions so long known to have been identified with fatal diarrhœa to bring about much the same results. These conditions are diminished rainfall and excess of temperature. During the third quarter of 1899 the rainfall was 2·9 inches below the average for the preceding 84 years, and the temperature, which was excessive during all the three months of the quarter, was 3·3° F. above the average for the previous 128 years. In other words, this year has been a "diarrhœa year," and the fact should stimulate all who are concerned with the promotion of public health to do their utmost to ascertain what are the precise local conditions which in certain towns and cities lead to this excess of death when there are little rain and much heat. In the meantime some good is, we believe, being brought about by the paving of yards attached to the houses of the poorer classes, and the provision of other means which tend to prevent pollution of soil and air in their neighbourhood.

The third quarter of the year was also remarkable from the occurrence of 29 deaths from small-pox, of which 23 took place in Hull. Indeed, that disease has maintained its prevalence in Hull so long as to indicate some laxity in either its sanitary administration or in the promotion of vaccination. As regards the former it is highly probable that the mistake has been the maintenance of a small-pox hospital in a neighbourhood around which there is a substantial population. Without discussing the rival theories of aerial convection and of personal infection as they are commonly understood and contrasted the fact remains that small-pox cannot safely be treated in hospitals situated in populous localities, and we are glad to know that the Hull Corporation have come to the conclusion forthwith to abandon the hospital which appears to many to have had concern with so unnecessary a continuance of small-pox in the borough. Similarly, we learn that vaccination is now being actively pressed upon the people, and we hope that, as in the case of Gloucester, an organised system of offering vaccination in the houses of the people will be set on foot. For one person who will go to a vaccination station 20 at least will accept vaccination if the vaccinator calls at their homes and offers to perform it then and there.

The year has been a remarkable one in that some experience has been derived as to the effect of the new Vaccination Act, the three essential conditions of which are domiciliary as opposed to stational vaccination, the use of glycerinated calf-lymph as opposed to arm-to-arm vaccination, and the provision of means for avoiding prosecution for failure to secure vaccination in individual cases under the "conscientious objector" clause. We cannot here discuss all the details of the operations of this new Act, but there can be no doubt that taking England and Wales as a whole the number of children vaccinated this year under the new

conditions is very largely in excess of that which obtained during either 1898 or even 1897. The use of glycerinated calf-lymph has now become practically general throughout the country, but this has not been brought about without complaint as to the lymph supplied to public vaccinators gratuitously by the Government; and it has transpired that lymph prepared during exceptionally hot weather, such as we experienced in some of the summer and autumn months this year, cannot be trusted to maintain its potency. In some countries this difficulty has been met by suspending vaccination during the hot summer months, but the terms of our Vaccination Acts would not admit of this; and hence a practice observed by some experts abroad and at home of preparing a store of lymph during cool weather for use during hot months will doubtless have to be resorted to. Of the conscientious objector clause we now hear but little, and that little is mainly to the effect that a number of parents who have taken out the necessary certificates at the instigation of agitators are so ignorant of their meaning that they actually present these very certificates to public vaccinators when requesting the vaccination of their infants. The extent to which this provision of the statute will be used remains to be seen; but one thing is certain—namely, that a scare of small-pox will always ensure the vaccination of most of the infants whose parents take advantage of it on their behalf. Unfortunately, this result is often only obtained after the sacrifice of the lives of many children whose parents have failed to get them vaccinated.

The prevalence of plague in one of the ports of Portugal naturally aroused much attention during and since the early autumn months. From June 4th to Dec. 4th 296 cases and 107 deaths are reported to have occurred in Portugal, and of these 293 cases and 106 deaths happened in the Oporto district, which includes the town and adjoining country. Two non-fatal cases were reported from Braga, and one fatal case from Lisbon, that of Professor Pestana. The risk to this country lies in the fact that vessels sailing from ports of Portugal reach our shores before the expiration of a term which is well within the extreme period of incubation of the disease; and in order that our port authorities might be on the alert the medical staff of the Local Government Board recently visited the authorities and officers of the ports principally concerned and advised as to the methods to be adopted so as to ensure strict medical inspection of all vessels coming from Portugal and immediate isolation in the case of sick persons. Since plague first appeared in Bombay some half-dozen cases have reached our shores, but under our system of port sanitary administration there has been absolutely no spread to any persons living in this country. Whilst, however, this is the case thus far, nothing short of extreme vigilance and a readiness of measures of prevention can be trusted for the maintenance of this freedom from an infection to which we may at any moment be exposed.

Action which has been taken under the direction of the Government during the year includes the labours of the Royal Commission on Sewage Disposal and those of a Committee to investigate the vexed question of the addition of "preservatives" to articles of human food. The Royal Commission have practically suspended the taking of evidence, but they are engaging the continuous services of a number of chemical and bacteriological experts and they are visiting works in different parts of the country. One of their greatest difficulties thus far is stated to lie in the absence of any practicable bacteriological standard to apply to effluents, and especially to effluents from "bacterial processes" of sewage disposal. The Committee on preservatives have only been sitting since the summer, but they are evidently actively engaged in their duties.

The legislation of the session of 1899 includes several statutes. First, there is the Local Government Act, 1899, which embodies a scheme under which metropolitan sanitary authorities will be converted into municipalities. Since in several instances multiple authorities will be united into one municipality the result cannot fail to affect a number of existing medical officers of health. Secondly, the Metropolis Management Act Amendment (By-laws) Act, 1899, relates essentially to the powers of the London County Council over works of drainage. Thirdly, the Infectious Diseases (Notification) Extension Act, 1899, makes the system of compulsory notification universal throughout England and Wales, and, apart from the case of Huddersfield, to which we have somewhat recently referred, the system will for the future be a uniform one. Fourthly, the Sale of Food and Drugs Act, 1899, gives additional powers to the Government in preventing adulteration and in the appointment of proper persons as public analysts; it extends the Margarine Act, 1887, to margarine cheese, and it improves the routine working of the Act in several important particulars. Unfortunately, there is a duplication of Government Departments in regard to State jurisdiction, one set of functions being supervised by the Board of Agriculture, another by the Local Government Board. How far this division of labour between those having primarily the agricultural interests at heart and those primarily concerned with public health will work remains to be seen.

The closing days of the year have, alas, brought with them an almost irreparable loss to the cause of Public Health by the sudden death at a comparatively early age of Sir RICHARD THORNE, the Principal Medical Officer of the Local Government Board, an obituary notice and portrait of whom was published in our last issue.

Vaccination in 1899.

Though the conscience clause of the Vaccination Act of 1898 came into operation some months before the end of that year the other sections took effect only as from the beginning of 1899. The year just closed has therefore given the first opportunity of witnessing the effects of an important experiment in legislation—an experiment which had been looked forward to with grave misgiving by very many and with hope by very few. Excepting with regard to one most serious omission from Mr. CHAPLIN'S Act THE LANCET has never taken anything like a despondent view of the situation created by the passing of that Act. Even the much-debated conscience clause has never been condemned by us, though the folly of the Government in not taking advantage of that clause to introduce under its wing a revaccination clause has been freely commented on, and in particular we have not hesitated to criticise the Government's unjustified and unjustifiable failure to fulfil their own promises, officially and unofficially made, regarding a Revaccination Bill, promises by which alone they succeeded in getting the Bill of 1898 pushed through Parliament.

Even in 1899 delays which naturally occurred in many parts of the country in getting all the machinery of the new Act into working order have prevented the complete effect of the Act from being thoroughly tested, while the lessons to be derived from the test cannot be completely learned until after the Local Government Board's Medical Department issues its detailed vaccination statistics for the year. In recent Parliamentary returns the statistics of vaccinations among children under six months old and of primary vaccinations among the children of defaulters are inextricably mixed. It is not to be doubted, however, that a very great improvement has taken place under the new Act and that many thousands of babies who under the old law would have remained open to attack and death by small-pox have received that protection which vaccination is so well calculated to afford. This, therefore, is at the same time the outstanding effect and the outstanding justification of the new Act—that many helpless children,

irresponsible for parental folly or neglect, have been shielded from death and disfigurement by one of the foulest diseases to which humanity is subject. The outstanding defect of the Act is that it has not extended to adolescents the boon which it has conferred on infants, though no insuperable or even serious difficulty stood in the way of such extension. Until this blemish is removed the Government's dealings with the subject cannot receive anything more than a very limited approval on the part of the medical profession and of the educated public.

It has been already said that even in 1899 the Act has only partially come into operation. To some extent this has been due to questions arising out of the appointment of public vaccinators and vaccination officers. By the Order issued by the Local Government Board on Oct. 18th, 1898, a minimum scale of fees was established as a basis of negotiation between boards of guardians and their officials. That scale showed, as we have mentioned quite recently in referring to the lamented death of Sir RICHARD THORNE, that the central authority had a very fair appreciation of the increased work which would be thrown on medical men engaged under the new Act. In preparing the scale it was evidently found that no cognisance could conveniently be taken of distance and of special difficulties in particular localities, and following on this various local bodies refused to satisfy the reasonable requirements of their vaccinators. Such refusal was in some cases owing to parochial parsimony, while in other cases an anti-vaccinating element in local boards exhibited itself in a thoroughly illogical and yet characteristic effort to wreak its spleen against vaccination by unjust conduct towards the officials appointed to carry out the provisions of the law. Under the order it fell to the Local Government Board to determine the fees in all cases not otherwise disposed of, and the man in the street would have supposed that this had brought the difficulty to an end. Now, however, that the time has come for the settling of accounts, in some localities a new and unexpected difficulty has arisen through the refusal of certain boards of guardians to pay the fees that have been earned. In such circumstances an onlooker would say that the obvious remedy was for the creditor to prosecute the debtor in the law courts, and no doubt payment could at once be obtained in this way. Here, however, an extraordinary anomaly comes to light. Under the terms of their contract public vaccinators are dismissable from office by their local authorities on 28 days' notice without any assigned cause being necessary and without any right of appeal to, or power of veto by, any central authority. Where a board is so mean as to refuse to pay its lawful debts to its own servants there is strong presumption that it would also be so mean as to revenge itself by the peremptory dismissal of any servant who had the temerity to compel it to pay. It is not easy to conceive of a stronger practical reason than these facts and considerations afford for endowing public vaccinators with security of tenure, and it is to be hoped that Mr. CHAPLIN will take whatever steps are necessary to protect medical men against the great injustice to which they are subjected by the absence of such security.

In the case of vaccination officers the difficulty has been of a different character. With the manifest purpose of bringing the new law into contempt certain boards of guardians under anti-vaccination influences have deliberately refused to appoint such officers. The allegation has been that they did so in the interests of local government, because having these officers to pay they ought also to have control of their work. There is in this contention a certain amount of force, and the matter is one which should have been dealt with in the Act of 1898. It is only too clear, however, that the objection, as raised for example in Leicester, is greatly wanting in *bona fides*, and that the real motive of the objectors has been to do everything possible to obstruct the practice of vaccination. In this connexion the Anti-Vaccination League has not hesitated to publish broadcast the misstatement that the independence of vaccination officers in the matter of prosecutions was conferred on them by the Order of the Local Government Board, whereas it is a matter of simple fact that the Order conveys no such power and that the power depends on the Vaccination Acts themselves as interpreted in the law courts and by the Government's law officers. In presence of such facts it is a matter for public congratulation that the efforts of the Leicester Board have ended in utter failure and that the Anti-Vaccination League by its blundering tactics and reckless neglect of truth in connexion with this question has inflicted on itself a blow which has seriously crippled its power for further mischief.

Comparatively little has been heard during the year of procedure under the conscience clause in the courts of petty sessions. The great rush of applicants in the latter part of 1898 had reference to children of then existing defaulters, such children being of any age up to 14 years. It would make an interesting Parliamentary return if Mr. CHAPLIN would give a statement of the number of certificates applied for during the year with reference to children under six months of age. We may be too sanguine in looking into the future, but there does seem some reason to hope that such applications will diminish rather than increase and that by means of the regular work of vaccination officers and by domiciliary vaccination and the use of the glycerinated calf lymph provided by the Local Government Board infantile vaccination will now steadily increase throughout the country.

As to domiciliary vaccination comparatively little cause for criticism has arisen, but it is very important that public vaccinators everywhere should exercise the greatest discretion in their dealings with the private patients of other medical men so as to avoid any suspicion of conduct not in accordance with the ethics of the profession. By some courts of petty session it has been decided that the public vaccinator cannot defer his visit beyond the time specified in his notice and by others that such notices sent by post ought to be registered in proof of delivery.

Regarding calf lymph issued by Government some complaints were heard during the hot weather of the summer, which appeared to injuriously affect the activity of the lymph. Steps are being taken, it is understood, to counteract any such deteriorating influence. In THE LANCET we indicated some months ago that we had instituted a special inquiry into the whole subject of the production of the glycerinated calf lymph by various makers. Unavoidable delay has occurred in the publication of the results of the inquiry, but we hope to begin the publication almost at once.

The University of London.

During the past year the Commissioners appointed under the University of London Act, 1898, have been drawing up draft statutes and transmitting them to the various authorities interested in the formation of the re-organised University for their consideration and report. The first portion of the proposed statutes was sent to those bodies in May and the second towards the end of July, and, of course, have been carefully considered and various points have been laid before the Commission. The statutes deal with the constitution of the University and with the proposed degrees and examinations and the regulations relating thereto. The fewest possible number of these draft statutes were printed and issued in strict confidence, and not communicated to the press, so that it is impossible for our readers to know anything as to the views or procedure of the Commissioners. We understand that

medicine and surgery will not be so fully represented on the Senate as will the Faculties of Science and Arts. This is surely an injustice to the large number of teachers and students in the various medical schools of the University.

Another most important development of the University of London is the consent to a change in its site in the future. Burlington-gardens is much too cramped in its space for the existing needs of official and examinational work and the authorities have for a long time been asking for more room. If further work is to be done a suitable site for its growing requirements is imperative. In June last after prolonged negotiations the Senate of the University passed a resolution assenting to the proposals of the Government to establish the University in the Imperial Institute Buildings at South Kensington. It is an absolute condition that the University shall hold directly and solely from the Government and not in any form or degree from the Institute. The east wing, the galleries, and the central portion of the building are to form the new University, except that the use of the latter part of the building will be at the absolute discretion of the Treasury after full consideration of the requirements of the two bodies interested. The University has also secured the first claim on the vacant or partially used land adjacent to the buildings of the proposed University.

The General Medical Council.

The General Medical Council held its two regular annual meetings. The first meeting for 1899 began on Tuesday, May 30th, and the Council sat till Friday, June 9th—10 days in all. It is nine years since a session of the Council lasted 10 days, but in the "good old days" this period was often exceeded and in 1877 the Council made a record session lasting 13 days. It is curious to compare the subjects which occupied its attention in that year with those which did so at its recent meetings. Among the former were medical education; the principles which should determine recognition of foreign practitioners, which recognition was made a condition of any amendment of the Medical Acts by successive Foreign Secretaries; the procedure and machinery of the Council in penal cases; and the need for legislation for the training of midwives, urged by the Obstetrical Society with the support of the General Medical Council. How like the work implied in the discussion of such subjects 22 years ago is to the work which engaged the attention of the Council in May last and at its recent meeting need not be emphasised.

At the May meeting of the present year the feasibility of raising the standard of the preliminary education for medical students, which all feel to be so desirable, was discussed on a report of the Education Committee. This committee suggested the taking of the opinion of experts on the subject. A small grant was given to them for this purpose and further time was allowed for consideration. The subject of the inspection of documents, on which there was never any real difference of opinion, was finally disposed of to the satisfaction of all parties. The question of personation was reported upon by the Executive Committee in connexion with a very gross case of fraud. The recommendations of the Executive Committee were not thought to be sufficient and the subject was referred to a Special Committee for further consideration. The issue of certificates of proficiency in any branch of medicine by registered practitioners, acting without legal authority, to non-medical persons was discussed by the Council, and a resolution was passed expressing its readiness to consider any well authenticated charge of the sort. The question of the recognition of foreign and colonial degrees, raised by various communications from the Privy Council and the Foreign Office, which was the subject of report by the Executive Committee was discussed with a certain narrowness of spirit. Those who object to such recognition dwelt on the difficulty of supervising foreign examinations, and, as an alternative to the conditional but complete recognition provided for in the Act of 1886, suggested restricted legislation that would permit the foreign graduate in England to practise only amongst his own compatriots. The objections sufficed to postpone the question till the Executive Committee should have procured Mr. MUIR MACKENZIE'S opinion on this restricted legislation—in other words, relegated the subject to a future meeting, which is a favourite device of certain members of the Council in resisting concessions which are bound to come sooner or later—a resistance which damages the Council as a public body. On the suggestion of the Medical Aids Committee the Council passed two resolutions, the one suggesting a Conciliation Board composed equally of representatives of friendly societies and of the medical profession for the settlement of questions which cause friction in the working of medical contracts, and the other expressing strong disapproval of the system practised in connexion with some medical aid institutions of canvassing and advertising for patients. A sharp passage of arms occurred between the representatives of the Royal Colleges of England and a large section of the Council. It was in connexion with a suggestion of the Education Committee to the effect that no medical student should be registered until he had passed a preliminary examination as required by the General Medical Council and had produced evidence that he had commenced medical study at a university, or school of medicine, or at a scientific institution recognised by one of the licensing bodies and *approved by the Council*. The Royal Colleges deny the need for approval of the institution by the Council and claim the sole right to recognise such institutions in the case of candidates for their diploma. In the division the representatives of the conjoined Colleges were left in a decided minority. Mr. HORSLEY raised an interesting discussion on the right of a practitioner registered in the Colonial List to have added in such list a diploma obtained from the Royal College of Surgeons in Ireland. He had the satisfaction of carrying his point against the opinion of Mr. MUIR MACKENZIE and of securing not only the registration of Miss RACHEL COHEN, M.B. of Calcutta, the first woman graduate of that university, but of giving a general character to the resolution which will enable all persons on the Colonial Register who acquire British qualifications to have such qualifications placed on that Register. Other questions on which we need not dwell were discussed at this long meeting. Amongst them the history of the appointments of the Council's lawyers and the Hunter case.

The second meeting of the Council began on Nov. 28th and lasted seven days, when the questions under discussion were a revival of those fully discussed at the May meeting. The Council received and adopted the report of a special committee on the employment of unqualified assistants, which only endorsed a previous suggestion of the Executive Committee in May to the effect that probably the best protection of the public against careless errors of dispensing is afforded by the responsibility of the practitioner for the acts of the servants whom he employs. The most important piece of work done was the acceptance by the Council of a resolution approving of clauses for the amendment of the penal and disciplinary powers of the medical authorities acting in coöperation with the General Medical Council and yet with a certain independence. A special committee was appointed to investigate the financial position of the Irish Branch Council. A deputation was appointed to seek an interview with the President of the Local Government Board on the urgent need for an amendment of the law regulating the Registration and Medical Certification of Death. A letter from Mr. UPTON, clerk to the Society of Apothecaries of London, on the use of the

titles of "Physician" and "Surgeon" by its Licentiates and others was referred to a special committee.

The treatment of other questions of importance, such as the recognition of foreign diplomas, regulations for the prevention of personation, &c., consisted in their postponement to a more convenient season. On one subject the Council again expressed itself strongly—viz., its claim to stipulate for the necessity of its approval of the institutions in which a student commences medical education. In the end a conciliatory form was given to this strong attitude of the Council as against the Royal Colleges, and it may be hoped that Sir WILLIAM TURNER'S tact and good judgment will lead to an agreement between the Conjoint Bodies for England and the General Medical Council.

The British Medical Association.

The sixty-seventh annual meeting of the British Medical Association was opened at Portsmouth on Tuesday, August 1st, under the Presidency of Mr. JOHN WARD COUSINS, M.D. Lond, F.R.C.S. Eng., senior surgeon to the Royal Portsmouth Hospital and an ex-president of the Council of the Association. This was the first occasion on which the Association has met at Portsmouth. Although of course Portsmouth has not the medical prestige of Edinburgh yet as a great naval and military centre it is one of the most important towns in England, and as the meetings of the Association combine holiday making with scientific discussions members were fortunate in being within easy reach of such objects of interest as a great naval arsenal, a large naval hospital, and a country possessing such natural beauties as the Isle of Wight.

The Presidential Address dealt with the advances in medicine, surgery, and the kindred arts during the century. The Address in Medicine, delivered by Sir R. DOUGLAS POWELL, was concerned with Recent Advances in Practical Medicine. Such were the use of the clinical thermometer, bacteriology, the question of susceptibility *versus* immunity, serum therapeutics, preventive inoculation, and the tuberculosis question. The Address in Surgery was delivered by Mr. ALEXANDER OGSTON, M.D. Aberd., the Regius Professor of Surgery in the University of Aberdeen. As was eminently fitting in such a place as Portsmouth it dealt with the Medical Services of the Navy and the Army. It was in the highest degree a fighting speech and has been much criticised. Another speech which was the subject of a great deal of criticism was that of Dr. GEORGE WILSON, the President of the Section of State Medicine, on Bacteriological Research. In the Section of Surgery Mr. HENRY T. BUTLIN discussed the question of the Treatment of Gunshot-wounds and the Treatment of Syphilis in the Services.

The members of the Continental Anglo-American Medical Society gave a luncheon at the Royal Pier Hotel on Wednesday, August 2nd. Among the guests were Professor OSLER, Sir WILLIAM BROADBENT, Sir RICHARD DOUGLAS POWELL, Dr. FREDERICK ROBERTS, Professor CLIFFORD ALLBUTT, Dr. BRYAN of Washington, Dr. LOUIS BAR of Nice, Dr. MITCHELL BRUCE, and Dr. J. WATSON of Southsea. The toasts of "The Queen" and the "President of the United States" were proposed by Professor OSLER, and the toast of the "Continental Anglo-American Medical Society" by Sir WILLIAM BROADBENT who pointed out how useful such a society was as a bond between British practitioners and those on the continent. Such gatherings serve to emphasise the bond of union between the two great branches of the Anglo-Saxon race—a bond which has lately had another and eminently practical strand added to it in the shape of the hospital ship *Maine*.

With regard to the discussions and papers in the various sections perhaps the most important was the discussion upon the Preventive and Remedial Treatment of Tuberculosis which was opened by Professor CLIFFORD ALLBUTT, the Regius Professor of Medicine in the University of Cambridge.

The various papers and discussions were mostly of a high standard but, possibly owing to the extreme heat of the weather, the sectional meetings were not so fully attended as were those at Edinburgh.

Among the guests from abroad were Professor TYSON of Philadelphia, Professor OSLER of Baltimore, and Dr. RHO of Rome, a distinguished Italian naval surgeon.

The Metropolitan Hospital Funds.

The reports of the three great collecting and distributing agencies of hospital charity for the year 1899 are records of work done in the interest of the sick poor of the metropolis of which we must all feel proud. The Metropolitan Hospital Sunday Fund, which was founded during the Mayoralty of Sir SYDNEY WATERLOW, has realised the hope which he, in common with ourselves and all who take an active interest in this Fund, desired—namely, that in the present year the grand total of the sums collected since the inauguration of the Fund would amount to a million sterling. Actually the grand total amounts to £1,009,638 5*s.*, an average total of £37,394 0*s.* 3*d.* for each of the 27 years during which the Fund has been at work. In the present year, under the treasurership of Sir JOHN VOCE MOORE, Lord Mayor of London, the sums collected amounted to £53,504 11*s.* 1*d.*, of which the sum of £50,500 was distributed among 138 hospitals, &c., and 54 dispensaries, and £2500 were set apart for the purchase of surgical appliances. Among the largest of the contributions from congregations the Rev. Prebendary C. J. RIDGEWAY, M.A., of Christ Church, Lancaster-gate, headed the list with £1375; the Rev. Canon FLEMMING, B.D., of St. Michael's, Chester-square, collected £1341; the Rev. J. A. STORRS, M.A., of St. Peter's, Eaton-square, £1081; and the Rev. Prebendary EARDLEY WILMOT, M.A., of St. Jude's, South Kensington, £742. A satisfactory increase of £1661 from congregational collections is shown for the year 1899. Mr. GEORGE HERRING sent the munificent donation of £10,000. 1000 guineas were received from Mr. J. LANE DENSHAM; Sir SAVILE CROSSLEY, Bart., again most generously contributed £500, and sent a like sum of £500 to the PRINCE OF WALES'S Hospital Fund; and "Delta" sent his twenty-first donation of £200.

During the year it was mentioned at one of the meetings that the Fund would ultimately benefit to the amount of £49,000 in Consols under the will of the late Mr. W. VOKINS, and we also understand that a legacy has been left to the Fund of £1090 by the will of the late Mr. THOMAS KING of Tisbury, Wilts.

The Hospital Saturday Fund, whose income now amounts to about £20,000 per annum, is dependent on the weekly collections made in the workshops and business houses throughout the metropolis, and up to Oct. 21st the aggregate amount received this year from the workshops' and clubs' collection was £12,461, as compared with £11,678 at the corresponding date of 1898. There has been a saving in expenses of £112 for the same period. The street collection, which was abolished in 1897, brought in £3330, whereas the new method of collecting money by placing boxes in shops, banks, &c., which has been substituted for the street collection, produced last year only £1172.

The PRINCE OF WALES'S Hospital Fund[1] has been steadily progressing since its inauguration in 1897 and during the present year £42,000 have been distributed. The receipts amounted to £47,808 4*s.* 10*d.* As the receipts were larger than those of last year and the expenditure less the working of the fund must be considered highly satisfactory.

[1] A report of the annual meeting appears on page 1813 of the current issue of THE LANCET.

That the sum for which appeal was made—namely, £50,000—was not reached must be attributed to the war in South Africa, which has occupied the attention of the public and drawn charity to a purpose that none can find fault with. In a brief summary of the work of the three funds for the year we cannot discuss the great necessity for the existence of these funds nor would such discussion be necessary for any of our readers. We all know the enormous amount of sickness and suffering which prevails in the metropolis and the dearth of hospital accommodation and funds. But on grounds of utility and economy we would like to point out the gain which would accrue to the sick poor of the metropolis if the three funds could be united. It is true that Sir SAVILE CROSSLEY pointed out at the annual meeting of the Metropolitan Hospital Sunday Fund that neither that fund nor the Hospital Saturday Fund had received any harm from the PRINCE OF WALES'S Fund, but that, on the contrary, the Prince's Fund, by more widely calling attention to the needs of hospitals, had benefited the other funds. This we believe to be so, but if the three funds were united the working expenses would be reduced and the machinery now used for carrying on one fund would do for all three. Moreover, in another way the funds would be increased, for there are many able and willing to give who cannot decide to which of the three funds to subscribe but who would have no difficulty if there existed only one central fund. That some kind of union will be agreed upon by the three funds sooner or later—and the sooner the better—we firmly believe, for there are other important directions in which such a large central body would have influence—to give only one instance the question of the rating of hospitals.

Sanitation in Ireland.

During the first and the last month of the year we have dealt with public health questions in regard to Dublin. At the commencement of the year the political capital compared favourably with the commercial capital of Ireland. For two years in succession Belfast had been afflicted by a serious epidemic of typhoid fever and we had denounced in strong terms the gross neglect in respect to drainage prevailing in that town. In Dublin even the poorest quarters are drained and there is a larger sanitary staff at the disposal of the authorities. But, on the other hand, there are far more poverty, wretchedness, dirt, and squalor in Dublin. This has now told upon public health and with the close of the year the death-rate in Dublin has exceeded the figure of 40 per 1000. A widespread epidemic of measles has produced a terrible mortality among children, while typhoid fever has occasioned more deaths than usual among the adult population. Our special Sanitary Commissioner has been despatched to Dublin to investigate this matter and his reports are now being published in our columns. Also in dealing with the grievances of the dispensary medical officers in Ireland our Commissioner showed that, in so far as these practitioners were also appointed medical officers of health, they were debarred by the circumstances in which they were placed from fulfilling their duties in the latter capacity. First, the pay, which very frequently does not exceed £20 a year and in some places does not amount to even that small sum, is altogether insufficient. Secondly, the appointments depend on religious and political considerations and not on technical capacity. Thirdly, the members of the local authorities who appoint the medical officers of health are often themselves notorious transgressors against the laws of health. The result is that the medical officer of health who wishes to live in peace is tempted to refrain, as far as possible, from seeking to enforce the sanitary laws.

The Royal College of Physicians of London.

Sir SAMUEL WILKS having intimated to the Comitia that he did not desire re-election, Dr. WILLIAM SELBY CHURCH was elected as President for the year. The opinions which we expressed at the time have been warranted by subsequent events and the College has in Dr. CHURCH a President whose scientific and literary attainments can only redound to its credit and who will prove a worthy representative in other than purely medical circles.

Although several matters engaged the attention of the College during the year there was no particular debate which calls for special reference.

In the early part of the year a communication was received from the President of the General Medical Council asking the opinion of the College on a proposal of the Council to obtain additional penal powers and submitting clauses for amending the Medical Acts with that view. The College approved the proposal that if a medical man be deemed guilty of any offence that might cause him to have his name erased from the Medical Register the General Medical Council should have the power of erasing his name for a limited period and that afterwards under certain circumstances his name might be returned to the Register, but declined to agree to the suggestion that as long as the erasion remained in force he should, *ipso facto*, be deprived of all his medical diplomas.

The report of the Midwives Bill Committee was received and adopted. The conclusions arrived at were: (1) that the College be advised to affirm the general principle that it is desirable in the interests of the poor to promote by statute the examination and licensing of midwives; and (2) that the College be advised to give its general approval to the Midwives Bill, 1899, without expressing any opinion with regard to the clause making penal the unlicensed practice of midwifery, and reserving to itself the right of criticising the details of the Bill and of making any representations which it thinks fit at the proper time and in the proper place.

Certain questions had been submitted to the College by the Education Committee of the General Medical Council on the subject of the standard of the preliminary examination of medical students. The main opinions expressed by the College were that the standard of examination should be raised and should be the same throughout the United Kingdom and that a period of not less than four years should elapse between the announcement of such a change and its enforcement.

The following awards were made during the year: the Swiney Prize for the best work on jurisprudence to Professor Dr. J. DIXON MANN; the Bisset Hawkins medal for work in connexion with sanitary science and public health to Dr. JAMES BURN RUSSELL; the Baly medal to Professor C. S. SHERRINGTON; and the Murchison Scholarship to Mr. ALFRED C. SANDSTEIN, M.B. Edin.

The following lectures were delivered during the year: the Milroy Lectures by Dr. G. V. POORE on the Earth in Relation to the Preservation and Destruction of Contagia; the Goulstonian Lectures by Professor G. R. MURRAY on the Pathology of the Thyroid Gland; the Lumleian Lectures by Dr. SAMUEL GEE on Bronchitis, Pulmonary Emphysema, and Asthma; and the Croonian Lectures by Professor J. B. Bradbury, on Some Points connected with Sleep, Sleeplessness and Hypnotics. Dr. ARTHUR FOXWELL was the Bradshaw lecturer, whilst the Harveian orator of the year was Dr. G. V. POORE.

A welcome announcement made during the year was the intimation that Dr. THEODORE WILLIAMS intended to give £1000 to the Endowment Fund of the College.

The Royal College of Surgeons of England.

The Centenary of the first Charter of the College is to be celebrated next year on July 25th, 26th, and 27th, and a supplementary Charter has been granted in order to enable the Council on that occasion to confer diplomas

of Honorary Fellowship on distinguished persons, and especially on foreign surgeons invited to the Centenary celebrations. Before presenting the petition for the Charter the Council called a meeting of the Fellows and Members to consult with them on the subject. 76 Fellows and Members were present and after much discussion a motion was carried asking that the petition should include a request for powers to grant some measure of representation to the Members of the College. The Members also presented a numerously signed memorial to the Council in which they asked that the new Charter should grant representation to the Members. The Council, however, decided that it was expedient to include only one matter in the petition. The Society of Members later presented a petition to the Privy Council asking for representation on the Council of the College, but the reply was to the effect that that subject could not be considered, as it was not referred to in the original petition. At the annual meeting of Fellows and Members held last month a motion was carried that the meeting regretted the action of the Council. The supplementary Charter is practically granted, only the formalities remaining to be complied with, but it is not improbable that before long the Members will get what they have striven for during so many years. The Council have at length decided to grant to the Members of the College the right to wear a distinctive gown for ceremonial occasions.

Sir WILLIAM MAC CORMAC, Bart., K.C.V.O., decided to exercise his right of remaining on the Council another year, as the term for which he was elected came to an end during his presidency, and he was re-elected President in July. Mr. H. G. HOWSE and Mr. JOHN TWEEDY were appointed Vice-Presidents. At the election of members of Council there were two vacancies and four candidates, Mr. T. R. JESSOP and Dr. WARD COUSINS applying for re-election; the two other candidates were Mr. H. W. PAGE and Mr. JORDAN LLOYD. Mr. JESSOP was re-elected and Mr. PAGE was elected. On this occasion only 16 Fellows voted personally and 477 voted through the post.

Two Members of 20 years' standing were elected to the Fellowship, Mr. T. F. CHAVASSE of Birmingham and Dr. FREDERICK DENNIS of New York. This is the first occasion on which an American has been elected to the Fellowship.

The appeal against the taxation of the property of the College was dismissed with costs.

Sir WILLIAM MAC CORMAC delivered the Hunterian oration in February and the occasion was honoured by the presence of the PRINCE OF WALES.

Mr. H. G. HOWSE delivered this month the Bradshaw Lecture on "A Centennial Review of Surgery."

Mr. A. PEARCE GOULD and Mr. BERNARD PITTS have been appointed members of the Court of Examiners.

The Jacksonian Prize for 1898 was not awarded and the subject for the year 1900 is the Pathology, Diagnosis, and Treatment of the Diseases Caused by, and Connected with, Imperfect Descent of the Testicle.

Dr. G. SIMS WOODHEAD, the Director of the Laboratories, was appointed Professor of Pathology in the University of Cambridge and he has been succeeded by Dr. T. G. BRODIE, and Dr. G. E. CARTWRIGHT WOOD has been appointed Superintendent of the Bacteriological Department.

At the annual meeting of Fellows in July only 21 were present; consequently no meeting was held, the quorum being 30.

Two important alterations have been made in the regulations for the Fellowship. One is that the first winter session may be spent at a recognised science institute, and the other is that candidates who are on the Medical Register will be admitted to the Fellowship examinations without being required to pass the examinations of the Conjoint Examining Board.

The earlier opening of the Museum has been much appreciated. We hope the Council will see their way to confer a like boon on the readers in the Library.

The Benevolent Agencies of the Profession.

The Royal Medical Benevolent College, which provides pensions for aged medical men and the widows of medical men in reduced circumstances and a school open to all classes but offering special advantages to the sons of medical men, 50 of whom are foundation scholars, is still doing good work, but is in need, like the other funds, of greater support. There are 50 pensioners, all of whom receive annuities of £30, with the exception of a few still occupying rooms in the asylum who receive £21. There are also nine "Pugh" pensioners who receive £30 a year each, one "Da Silva" pensioner who receives a pension of £20 per annum in addition to the out-pension received from the College, and three "Morgan" annuitants who receive annuities of £20 each. Fifty foundation scholars receive an education of the highest class and are boarded, clothed, and maintained at the expense of the College. Nine perpetual presentations for female orphans of medical men and one with certain restrictions open to those who are not orphans exist in connexion with the College at the School of St. Anne's Society. As the College has not much in the way of permanent income the cost of maintaining the 50 foundation scholars and the 50 pensioners has to be defrayed mainly out of the annual subscriptions and donations and these have for some years past been insufficient for the purpose.

The income of the British Medical Benevolent Fund has not covered the outlay and subscriptions are urgently needed to maintain the efficiency of the grant department. The annuity department shows an income from investments of £2330, while the amount paid in annuities is £2218. The annuitants number 109. In the grant department the income from subscriptions and donations is £1200, while the amount voted by the committee in payment of grants totals £1595. 161 cases have been relieved. The Society for the Relief of Widows and Orphans of Medical Men is another of the benevolent agencies which deserve to be more widely supported. The receipts for 1898 amounted to £3326 2*s.* 8*d.*, and the grants and expenses to £3267 10*s.* The Society has 287 members. The number of widows on the funds is 50 and of orphans 10.

THE LANCET Relief Fund still continues to relieve cases of temporary distress, and the report for 1899, which will be published next week, will probably show that the number of cases dealt with this year is no greater than that of last year. The amount expended in gifts and loans may, however, show an increase.

The Analytical and other Commissions of THE LANCET.

Several important experimental inquiries have been conducted in THE LANCET Laboratory during the year. Not the least important one was that dealing with the analysis of abortifacients, this inquiry, which was begun in the autumn of 1898, being concluded in the early numbers of THE LANCET of the present year. Reference is made elsewhere to this inquiry and the excellent practical results to which it has led.

In the first number of THE LANCET this year (Jan. 7th, 1899) the report appeared of THE LANCET Analytical Commission on some Leadless Glazes. Several specimens of leadless glazes were examined. The results we considered to be of the utmost importance, for they indicated the probability of absolutely leadless glaze being substituted for the old lead veneer without detriment to the beauty and finished appearance of the product. Within three months of the publication of this article appeared a report on "The Employment of Compounds of Lead in the Manufacture of Pottery," in the form of a blue-book, for which Professor

T. E. Thorpe, LL.D., F.R.S., and Professor Thomas Oliver, M.D. Glasg., F.R.C.P. Lond., were jointly responsible. The inquiry was, of course, undertaken for the Home Office, and it was a source of considerable satisfaction to us that these experts came to conclusions in regard to leadless glaze which were remarkably in accordance with our own upon the subject. The question has not since dropped, and further practical evidence has been furnished of the practicability of adopting leadless glazes, and we are glad to note that the Government have quite recently taken an important step in this matter. Last week we recorded that in an important circular issued by the Home Office to the pottery trade the Secretary of State announces that he is satisfied that for many purposes leadless glazes can be adopted without injury to the trade and the special rules will therefore be relaxed for factories or processes in which no lead is used.

Much of the time of our Laboratory Commissioners was devoted during the year to the analyses of the thermal springs of Bath and to the analyses also of the water-supplies of that city. Some of the work—as, for example, that which related to the analysis of gases—was conducted on the spot. The historic springs at Bath were thoroughly examined and exhaustive analyses were made of the waters. The analyses of two of the thermal springs had not been made before. Further, there were some new features in THE LANCET analytical account of these waters. In the analysis of the gases given off in these hot springs the existence of argon and helion was demonstrated. The results altogether were of a most important kind as throwing more light than before on the therapeutics of the Bath thermal waters. An inquiry of this nature could not be complete without reference to the condition of the water-supply and therefore analytical attention was directed to the two sources of supply to the city of Bath. Samples of water were taken from the two reservoirs at Batheaston and Monkswood respectively, and at the same time corresponding samples were taken from the town mains. Ultimately it was concluded that, so far as chemical analysis showed coupled with the inspection of the sources, Bath was in the possession of an excellent water-supply. Furthermore, the supply was shown to be abundant for all purposes.

The next report emanating from THE LANCET Laboratory was that on "Mineral Substances in Dress Materials," which appeared in THE LANCET of Oct. 28th, 1899. It would seem from these experiments, which established the presence in some instances of a comparatively large amount of irritant mineral substances, that not all dress materials are free from reproach as possible sources of injury to health, and further it was pointed out that the presence of mineral substances tends to nullify the important properties of clothing of keeping the body warm and protecting it from the cold, and, above all, of allowing a free passage of air from within and without. No trace of arsenic could be found in the highly-dyed fabrics, but, as was remarked at the time, it was surprising to find such a range of metallic substances in the dress materials of everyday wear and the quantities found were no less a revelation.

The subject of inquiry in THE LANCET Laboratory which followed had reference to English lager beer the manufacture of which is a recent and interesting departure undertaken by the old-established firm of Messrs. ALLSOPP and SON of Burton-on-Trent. These brewers had been impressed with the demand for lighter beers and they determined to meet this demand by laying down extensive machinery for the production of lager beer similar in kind to that produced on the continent. We published analyses made in THE LANCET Laboratory of the beer so produced, contrasting the results with ordinary ale. The chief differences in composition related to alcohol which in this lager beer was nearly half the amount contained in heavy ale, while the extractives, consisting of dextrine, maltose, proteids, and hop principles, occurred in the same proportion. We gave the subject some prominence from the fact that the question of the suitability of a beverage is one which constantly confronts the medical man in deciding upon a regimen for his patient. We expressed the belief that this step to supply a wholesome and refreshing beverage of trifling alcoholic strength is important in its relation to temperance reform.

Lastly, our Laboratory Commissioners have been engaged upon an inquiry as to whether certain cigarettes contained the poisonous materials which were alleged to be present in either the tobacco or the paper wrapper. As the results appeared so recently in THE LANCET (Dec. 9th, 1899) they hardly need recapitulation. In brief, it may be stated, however, that a movement has gained ground in the United States against the use of cigarettes on the assumption that they contain toxic substances over and above those which may be present in pure tobacco. It is simply the revival of a notion that had currency in this country in 1888 that Turkish cigarettes contained opium while the paper contained arsenic. An Analytical Commission of THE LANCET showed then that the allegation was unfounded and the recent inquiry based on a great number of analyses has proved the same thing in regard to American manufactured cigarettes.

The number of samples examined in THE LANCET Laboratory during the year and reported upon under the heading of "Analytical Records" was 105. The analyses thus involved amounted to 360. Under the heading of "New Inventions" 15 analyses appeared. The work of THE LANCET Analytical Commission in regard to special inquiry has involved the carrying out of 250 quantitative analyses besides many qualitative determinations. The total number of analyses under all heads, therefore, reaches 625, which is equivalent to an average of 12 analyses being published in every issue of THE LANCET during the past year.

Quacks and Abortion: A Critical and Analytical Inquiry.

During the past year we have continued and brought to a conclusion our series of articles entitled "Quacks and Abortion," and have had the satisfaction of seeing one of the largest firms connected with the infamous trade which we had exposed, one moreover to which we had devoted particular attention, prosecuted at the Old Bailey, with the result that those responsible for its dealings have been sent to undergo richly deserved sentences of imprisonment. The difficulties in the way of the prosecution were precisely those which we indicated when we wrote in our first article that "it seemed fairly clear that the persons to whose advertisements we have referred, should they *in fact* carry on an unlawful trade, were tolerably well provided for by the law," meaning, of course, that if the goods advertised were in fact harmless prosecution under the Act relating to the procurement of miscarriage might be attended with difficulties. According to the view taken by Mr. Justice DARLING had the goods sold by those trading as Madame Frain been harmless to their knowledge they might have got off under the indictment preferred against them, although prosecution for obtaining money by false pretences would have been possible. They were, however, convicted, as there was ample evidence that the compounds which they sold were noxious within the meaning of the Act, and were sold as such, while a glance at our columns dealing with those carrying on a like trade will show that a similar condition prevailed in most of the cases which came under our notice. As we stated at the time in detail mixtures were not only sent to our representative containing savin, pennyroyal, aloes, and other drugs which are known to have an established reputation among quacks and their patients as abortifacients, but manuscript

letters accompanied them in some instances which showed a genuine desire and intention on the part of the writers that the drugs should be efficacious. It will be remembered also that there could be no question of the meaning of the letters written by our representative, for on all occasions, at least, in which a second letter was written, it contained a plain statement that the writer was a pregnant woman, and although in most instances the concoctions then sent were said to be stronger and were unquestionably more costly than the first instalment, on only one occasion did the open allegation of pregnancy deter the advertiser from further communication with us. With the Frain firm our experience was that our first postal order produced no result, not even the return of the order, while a second one sent in another name, with a plain statement of pregnancy, obtained for us what was required. In chronicling the disappearance of this infamous trade from the columns of our newspapers we must remind our readers that it has long flourished through the ease with which it obtained the insertion of its advertisements; that, apart from the question of the efficacy of the goods sold as abortifacients, they have been proved in courts of law to have brought about the deaths of women who have used them and that robbery and blackmailing of the most cruel type have also been brought home to the vendors. It has also been proved to have been an extremely profitable form of commerce, and it is one therefore which may very well be expected to revive to some extent, but it is to be hoped that the authorities, who have been slow in recognising and dealing with the evils, will at any rate allow no such re-appearance even on a small and comparatively insignificant scale.

We may add some observations about the analytical part of the inquiry. The chemical analysis and examination of pills and potions, it must be admitted, is attended with difficulty and must necessarily be limited in scope owing to the fact that the chemistry of the principles of many plants has been very incompletely studied, and in our present state of knowledge no definite scheme of analysis has been devised which can be absolutely relied upon to lay bare the proximate composition and nature of a substance of botanical origin. Nevertheless, even so far as it goes chemical analysis associated with chemical tests afforded, as we found, some very instructive results. It distinguished, for example, between an exclusively organic extract and a solution of mineral salts, and it enabled us to state the kind and amount of these salts, and, further, by its aid we were able to isolate certain plant principles which could be more or less recognised by specific reactions.

To find the density of a potion is an excellent preliminary step as affording at once an indication as to whether the potion is a strong liquor or contains a considerable proportion of dissolved substances, be they organic or inorganic. The amount of dissolved matter in any case will vary in direct relation to the density and further examination will show how far this is organic or inorganic in character. Pills and potions alike will yield certain extractive matters, bitters, alkaloids, and allied bodies, to solvents such as chloroform, ether, alcohol, benzine, &c., and the physical characters—smell, taste, &c.—of the principles thus extracted, coupled with the reactions gained on the application of certain chemical reagents, afforded a plan of examination which was calculated to throw some light on the nature of the original preparation. Some bitter principles, as those of aloes, admitted of precise detection in this way and to some extent of the determination of the actual amount present, but we did not think any purpose would be gained by ascertaining the probable quantity of aloes present. Distillation in a current of steam again is a means of separating and to some extent of measuring the quantity of volatile oils or of liquids not miscible with water if they should happen to be present. The oil of savin, of parsley, and of peppermint and pennyroyal may be quoted as examples, while chloroform, which was present in one instance, would be expelled in the same process.

The results, therefore, embodied in the analytical section of this inquiry were simply the evidences of a laboratory examination so far as that could be turned to account in ascertaining the nature and composition of the pills an potions which were procured. Though the results of thi examination with a few exceptions could not be relied upon to clear up entirely the *precise* nature and composition of the fluid or solid under investigation, yet this important undertaking of the inquiry was not carried out in vain but, on the contrary, afforded a good general idea of the kind of thing which is sold as an abortifacient, while it allowed of some sort of a classification being made. Thus we found among potions (1) weak infusions or teas of senna, rue, savin tops, and certain bitters (these show a small amount of extractive matters which on burning give a smell like that of the smoke of a bonfire; the specific gravity of such fluids is accordingly not much greater than that of water itself; these infusions unless they contain an antiseptic oil commonly become turbid after a time and mouldy); (2) strong liquors or extracts with aloes, jalap, rhubarb, or other extractive substances as medicinally active constituents with a high specific gravity and yielding a large proportion of evaporated residue, including probably sugar with a small proportion of mineral matters which when in excess are invariably due to iron; these preparations sometimes contain also powerful aromatic oils such as peppermint and oleum pulegii; and (3) strong solutions of mineral purgative salts, e.g., sodium sulphate, with which an iron compound is invariably associated. The specific gravity of such a mixture is accordingly high while the organic matters are comparatively low, the mineral matter being in excess from the salts present. The pills, so far as our examination went, may be thus broadly classified—(*a*) aloes and iron compound; (*b*) iron with purgative extracts other than aloes as cascara or rhubarb; and (*c*) the same as the last but containing in addition an irritant oil like savin, pennyroyal, or apiol. In the inquiry we recorded the results thus defined which are expressed in terms as plain as possible so that they might convey to the reader a very fair idea, so far as chemistry will allow, of the nature of the preparations under examination. In some cases we were content in regarding the presence of certain constituents as highly probable in accordance with the analogy between the reactions obtained with them and of the constituents extracted in a precisely similar way from known standard preparations. In other cases it was found possible not only to identify the nature of a drug present but also to record its amount. Special attention was of course paid to the probability of the presence of aromatics, cholagogues, ecbolics, emmenagogues, cathartics, and carminatives.

The Organisation of the Profession.

The question of the organisation of the profession, whether in view of fighting the battle of the clubs or of agitating for the prevention of hospital abuse and the maintenance of professional dignity and independence, has occupied a large portion of our space during the year. The personal investigations made in various localities by our Special Commissioner all go to prove that the development or evolution of economic forces affect professional work as well as commercial enterprise. The tendency throughout is towards the cheapening of the cost of production and distribution. This is attained by organisation and competition, and by these means, also, systematic efforts have been made to obtain medical service on the cheapest possible terms. But medical practitioners have been slow to organise; therefore, and so far, the force of organisation

has in the main told against them. They have been the victims of the new forces brought into play. But those medical men who in regard to these economical questions possess more knowledge, or more intelligence, or a deeper sense of public duty have striven to utilise the machinery and force of organisation in defence of professional interests. Hence we find the formation of medical unions, guilds, and associations in various parts of the country. In previous years we made special efforts to describe and to bring forward evidence proving the widespread character of the grievances affecting the economical position and the professional dignity of medical practitioners. These facts came out in the course of the long series of articles on the Battle of the Clubs and on Hospital Abuse. But this year more particular attention has been given to remedial measures. Thus the first article on these topics, though dealing with the old subjects of the battle of the clubs and hospital abuse, was more especially interesting because it also described the successful organisation of the medical practitioners of Weston-super-Mare. Here a provident club had been formed by the united action of the medical men themselves. The first care, of course, was to establish a wage-limit and thus to put an end to the abuse that prevails so extensively in provident institutions which are managed by lay committees. The second fundamental principle was that any fully qualified practitioner might become one of the active medical officers, and thus no monopoly could grow up to the advantage of a few medical men and to the disadvantage of the majority of their colleagues. This is what has recently been done, and with a considerable measure of success at Weston-super-Mare; and after describing this new organisation we published a full account of the progress accomplished during the last three years by the parent institution of this nature, the Eastbourne Provident Medical Association. Here we found that not only had the speculative insurance companies which provide medical aid been held at bay, but the medical officers were actually clearing higher net profits from their contract work than they had ever obtained before, and this in spite of the stringent rules and the abolition of all abuse. At Coventry the struggle, carried on in the same manner, is more arduous and difficult. Here the chief adversaries are six leading medical practitioners, who cannot be brought to break their connexion with the Coventry Provident Dispensary, where, under the management of a lay committee, many and grievous abuses prevail. Nevertheless, the union of the other medical men in the town who constitute the majority of the local practitioners has successfully established the Coventry Public Medical Service. This is constituted on the same basis as the Provident Medical Association of Eastbourne. The Coventry Public Medical Service has some 8000 subscribers; it pays its way and yields greater proportionate profit to its medical officers than is obtained by the medical men who remain in the service of the dispensary managed by the lay committee. Yet the latter have a dispensary of their own while the former have to pay 1*s.* per annum per member to dispensing chemists. Thus the Coventry Public Medical Service has done much to show how by organisation medical men can meet the greatest difficulties, provide efficient medical aid for those who cannot afford to pay fees, and yet avoid being victimised under the pretext of charity. In respect to constructive policy the articles which we published on Weston-super-Mare, Eastbourne, and Coventry are at once most instructive and encouraging.

To forward the work of organisation we were able to announce in the early spring that the medical unions of France had obtained from the French Government the promise of every assistance and patronage so that a great international congress might be held on the question in Paris during the forthcoming Universal Exhibition. This congress we further described in our issue of May 6th. It will be held from the 23rd to the 28th of July next year, and will deal with all economical and ethical questions affecting the medical profession. To the International Congress on Medical Ethics most nations will send representatives, and what they have to say will prove that similar economical forces are at work abroad and that, like the practitioners of England, they have had to meet the difficulty by organisation. The support which these organisations have received and the discipline which they have been able to establish within their own ranks excel in some instances anything that has been accomplished in England. This was notably the case with the Medical Syndicate of Brussels, and during the course of the year we published an article on the work of medical organisation in that town. In Brussels—and this is an important fact—the organised working men were seeking to assist the medical profession in their efforts. As contract work is organised for the benefit of the poor—that is, for the less prosperous sections of the working class—it goes without saying that to be successful the medical officers of such institutions must come to a common understanding with the leaders of the working class. This has been done in Brussels and both professional and labour unions are working in harmony together. We likewise described the progress of medical unions in France and showed how various forms of quackery had been abolished and legal contests successfully initiated by the unions, thus obtaining justice for individual medical practitioners who without the aid of their union would not have had the means of appealing to the law courts. Also in regard to medical legislation the medical men have formed a Parliamentary group consisting of all medical men who are either Senators or Deputies, and this has had a beneficent effect in more than one direction.

At home we had the pleasure of describing at great length the very perfect organisation of the colliery surgeons in the Bolton district. Here all the local practitioners, to the number of about 100, are in union and they have organised and carried out a strike against an obnoxious accident club. Near at hand, at Wigan, there is also a medical union called the Wigan Medical Guild and we published the history of this organisation. At Stockport likewise the profession is organised and the history of this movement was also interesting and instructive. At Stockport there had been a movement against a medical aid society which on the whole resulted to the advantage of the medical profession. The accounts which we gave of the Ashton-under-Lyne Medical Society and of the Manchester Medical Guild with its 200 members all went to show that in Lancashire, at all events, the medical profession is realising the necessity of organisation. The only disappointing chapter in this history of the movement relates to Nottingham. Here one of the first unions was formed in 1896 and it gave excellent promise. Of late, however, this organisation has lapsed into a passive condition, and though it still exists it has not made any progressive movement of late. Finally, after giving full details about the organisations mentioned above we published a list of 30 similar unions formed to deal with economical problems. This is the first time that such a list has been drawn up and it is far from being complete. Nevertheless it will serve to make known to each other organisations that are striving for the same ends, and it is for those societies which were not included to send us details so that they may appear in the next list. From all this it will be seen that the work of organising the profession, though still in its earliest stage, has taken shape and already constitutes a vital force.

Honours to Medical Men.

"The winning of honour is but the revealing of a man's virtue and worth ....." and the various titles and distinctions conferred upon members of the medical profession

during the year 1899 which it is our pleasant duty to chronicle are the outward symbols of well-earned rewards for merit. The two great lists of the year—the New Year's Honours and the Birthday Honours—did not give us the same degree of satisfaction, for while the first named was a widely representative list the latter was hardly as generous as could be wished for, seeing that the year 1899 was the sixtieth anniversary of the year when Her Majesty ascended the Throne. As will be seen from the following list the names included in the New Year Honours embrace varied branches of the medical profession not only in the British Isles but abroad. No doubt this list would have been longer, but coming as it did so near to the Soudan rewards the names of members of the services was not quite up to the usual strength: Sir HENRY THOMPSON, F.R.C.S. Eng., received a baronetcy while Sir HERMAN WEBER, F.R.C.P. Lond., and Sir G. PLUNKETT O'FARRELL received knighthoods. Sir CHARLES CAMERON, M.D. Dub., was made a C.B. and Mr. R. W. MOFFAT, M.B., C.M. Edin., and Mr. J. S. MACPHERSON, L.R.C.P. & S. Edin. each received Companionships of the Order of St. Michael and St. George. Companionships of the Order of the Star of India were given to Colonel WILLIAM PLEACE WARBURTON, M.D. Edin., I.M.S., and to Colonel DAVID SINCLAIR, M.D. Aberd., I.M.S., respectively. Companionships of the Order of the Indian Empire were conferred upon Lieutenant-Colonel HENRY KELLOCK MCKAY, M.R.C.S. Eng., I.M.S., and also upon Major WINTHROP BENJAMIN BROWNING, L.R.C.P. & S. Irel., I.M.S.

The Birthday Honours, as we have intimated, were disappointing though the rewards bestowed were well won. Sir J. S. BURDON SANDERSON received a baronetcy and Sir MICHAEL FOSTER a K.C.B., and Sir WILLIAM MITCHELL BANKS a Knighthood; Sir JOHN SIBBALD also received a Knighthood; and a Companionship of the Bath went to Surgeon-General GORE, a C.I.E. to Lieutenant-General W. G. KING, R.A.M.C., and a C.M.G. to Major WILLIAM BABTIE, R.A.M.C.

In the latter part of the year Surgeon-General WILLIAM TAYLOR, C.B., A.M.S., was promoted from Honorary Associate to Knight of Grace; and ROBERT CHARLES BROWN, M.B. Lond., F.R.C.S. Eng., was appointed an Esquire of the Order of the Hospital of St. John of Jerusalem in England.

The Uganda Honours List contained the names of Captain G. S. MCLOUGHLIN, M.B. Durh., and Captain J. D. FERGUSON, both of the Royal Army Medical Corps, who each received the Distinguished Service Order. Each of these officers has also received from his highness the SULTAN OF ZANZIBAR the Brilliant Star of the Third Class.

Surgeon-General J. JAMESON, C.B., Director-General of the Army Medical Service, has received from the GERMAN EMPEROR the medal instituted in memory of the late Emperor WILLIAM for services in connexion with the Franco-German War, and the Order of the Chevalier of the Crown of Italy was conferred upon Dr. CHOKSY, the medical officer of the Arthur-road Fever Hospital at Bombay, in recognition of his services to humanity and science, and for the cordial assistance given to Italian doctors when studying the plague and other diseases at the Arthur-road Hospital.

Our list would scarcely be complete if we did not mention the public recognition of the services of Sir JOSEPH FAYRER by the Government of India who sent this distinguished officer a letter saying that upon the recommendation of the Governor-General of India in Council Her Majesty's Government had been pleased to confer upon him, as a reward for distinguished and meritorious service, a good service pension of £100 per annum. The letter concludes: "I am directed to add that, with a view to make this mark of Her Majesty's approbation of your conduct in the service as public as possible, your nomination has appeared in the *Gazette* of India, and your name will also be inserted in the Army List as one of those officers who have been selected to receive a reward for distinguished or meritorious service. I am further desired to convey to you the satisfaction with which the Government of India view Her Majesty's gracious recognition of your good services to the State."

In the name of the profession we congratulate all these gentlemen who have won well-merited distinction for themselves and, at the same time, conferred lustre and honour upon their calling *virtute ac labore*.

Obituary.

Year by year we summarise the losses which the profession has sustained by death and year by year the tale shows how universal is the field of work for medical men. In the navy, in the army, in the Indian civil service, in far away and distant posts as well as in the busy town, in the medical schools of great cities, and in little country parishes the fighters against disease one after another lay down their arms and yield honourably to the enemy whom they have fought for many or few years. Some, despite the risks and hardships of a practitioner's life, pass to their rest full of years and honours, others are cut off at perchance the very threshold of their career. The first death noted in our columns for this year is that of DONALD CAMPBELL BLACK, M.D. Glasg., who passed away suddenly on Dec. 20th, 1898. A clever, able man and a good physician, he had the unfortunate faculty of entering upon controversies in a spirit which brought about bitterness and prevented his arguments, even when, as they generally were, cogent, from receiving the attention due to such.

In the navy the profession became the poorer by the loss of JOHN ROSE, M.D. Aberd., who passed away at the age of 76 years while asleep. He served in the Royal Navy during the China war of 1857–58. JOHN GEORGE SINCLAIR COGHILL, M.D., F.R.C.P. Edin., M.R.C.P. Lond., was best known to the profession from his work at Ventnor in connexion with tuberculosis. But in early life he had served in the navy as a volunteer with the Baltic Fleet during the Crimea. Sir ALEXANDER ARMSTRONG, K.C.B., F.R.S., M.D. Edin., F.R.C.P. Lond., who died in his eighty-second year, entered the medical department of the Royal Navy in 1842. He served as surgeon and naturalist on board H.M.S. *Investigator* which sailed on the Franklin relief expedition in 1850. He also served in the Baltic during the Crimea and from 1869 till 1880 was Director-General of the Royal Navy.

In the Army Medical Service occurred the death of Surgeon-General Sir JAMES MOUAT, K.C.B., V.C., one of the heroes of Balaclava, where he won the most coveted of all military distinctions. He had also seen service in the New Zealand War of 1863–65, and was an Honorary Surgeon to the Queen. Dr. ROBERT PRINGLE of the Indian Medical Service, who had attained the rank of Brigade-Surgeon-Lieutenant-Colonel, had seen service in the Mutiny and was a keen sanitarian. He took a great interest in the prevention of the smoke nuisance, and was the inventor of an admirable stove for warming by means of gas. FRANCIS NOTTIDGE MACNAMARA, M.D. St. And., M.R.C.S. Eng., was also a member of the Indian Medical Service, but devoted his time to chemical and sanitary problems. He was Professor of Chemistry at the Calcutta Medical College and chemical examiner to the Indian Government. Deputy Inspector-General JOSEPH JEE, V.C., C.B., served through the Mutiny, receiving the Victoria Cross for gallantry at the relief of Lucknow, by which action he saved the lives of a large number of wounded. He was also an honorary surgeon to the Queen. Surgeon-Major GEORGE CHARLES WALLICH entered the Indian Medical Service in 1838, served in the Punjab campaign of 1847, and retired from the service in 1858. In 1860 he served on board H.M.S. *Bulldog* as naturalist during her expedition to survey the Atlantic bottom for the purpose of laying a cable. In after years he

received the gold medal of the Linnæan Society for his researches into bathybial and pelagic life. JOHN FENTON EVANS, M.B., C.M. Edin., was a major in the Indian Medical Service. He was professor of pathology in the Calcutta Medical College and died from plague presumably contracted during the discharge of his duties in performing post-mortem examinations upon the bodies of plague victims. He had previously seen service in Burmah and also in the Lushai Hills. He was only 41 years of age at the time of his death. Sir WILLIAM HENRY FLOWER, K.C.B., F.R.S., F.R.C.S. Eng., had in early life served in the army as assistant surgeon to the 53rd Regiment throughout the Crimean war. After his return to England he held a post at the Middlesex Hospital as assistant surgeon and demonstrator of anatomy. Subsequently he was appointed conservator of the Hunterian Museum of the Royal College of Surgeons of England, and finally succeeded Sir RICHARD OWEN as director of the Natural History Department of the British Museum. GEORGE YEATES HUNTER, M.R.C.S. Eng., attained the rank of Brigade Surgeon in the Indian army and served in India for about 30 years. WILLIAM IRELAND DE COURCY WHEELER was a well-known practitioner in Dublin. In the early part of his career he served as a staff surgeon in the army, being out in the Abyssinian expedition. After leaving the army he settled in Dublin and was elected President of the Royal College of Surgeons in Ireland. Captain MATTHEW LOUIS HUGHES, of the Royal Army Medical Corps, who was killed at the battle of the Tugela River, was one of the foremost scientific workers in the army and his death comes as a very severe loss to the profession. Captain HUGHES was the son of Colonel E. HUGHES, C.M.G., and was educated in King's College School. In September, 1885, at the age of 18 years, he joined the Medical Department of King's College, and was one of the ablest scholars of his time. His practical work was excellent and he was soon appointed Assistant Demonstrator of Anatomy by Professor CURNOW. He was intended for the Army Medical Service, and passed through Netley with distinction, being Parkes Prizeman of his year. He was specially interested in the subject of Malta fever and had written many papers and articles on the subject both in our columns and elsewhere. His last post before leaving for the Cape was at Aldershot, where he was assistant sanitary officer, and as such had charge of the patients who suffered from the curious attacks [of gastro-enteritis which occurred there in August and September. An account of this outbreak appeared in our issue of Nov. 4th, 1899, from the pen of Captain HUGHES, R.A.M.C., assisted by Captain C. W. R. HEALEY, R.A.M.C. He had only recently been made an Associate of King's College, and nobody was more loved and liked by his fellow-students and teachers than MATTHEW LOUIS HUGHES.

Coming now to civilian practitioners we must first notice the severe losses sustained by the metropolitan and provincial schools of medicine. Early in the year the University of Glasgow was deprived of the services of her Professor of Pathology in the person of JOSEPH COATS, M.D. Glasg. He was an admirable teacher and his memory will ever be kept green in the sight of men by the magnificently equipped pathological institute which will stand as a monument to his unflagging devotion to the University which he so faithfully served. HENRY ALLEYNE NICHOLSON, M.D. Edin., was Professor of Natural History in the University of Aberdeen at the time of his death, but had formerly filled like posts in the Universities of Toronto and St. Andrews. The University of Aberdeen also had to mourn the loss of Sir JOHN STRUTHERS, M.D. Edin., Emeritus Professor of Anatomy. To him is due the magnificent and orderly arrangement of the Anatomical museum at that University. A third great Scottish university—namely, Edinburgh—suffered an irreparable loss by the death of WILLIAM RUTHERFORD, M.D. Edin., the Professor of Physiology. We need say no more than refer our readers to the feeling panegyric on his old master written by Professor SIMS WOODHEAD which appeared in our columns. Turning to English universities the Victoria University saw the death of Sir WILLIAM ROBERTS, her first Professor of Medicine. The son of a Welsh medical man he studied at University College, London, among his contemporaries being RUSSELL REYNOLDS, GEORGE BUCHANAN, and WILSON FOX. Of his admirable scientific work and professional attainments all are cognisant and his Croonian lecture on the "Chemistry and Therapeutics of Uric Acid Gravel and Gout" was one of the most important contributions which have been made to the better understanding of these disorders. THOMAS CARGILL NESHAM, M.D. Edin. and Durh., was a well-known practitioner in Newcastle-on-Tyne. He was formerly Lecturer on Medicine to the Newcastle College of Medicine, Examiner in Anatomy to the University of Durham, and from 1875 until the time of his death he held the post of Examiner and Lecturer in Midwifery to the University of Durham College of Medicine. Irish medicine sustained a heavy blow by the death of JAMES CUMING, M.A., M.D.R.U.I., Professor of Medicine at Queen's College, Belfast. He was a man of wide and varied culture, an excellent classic with a devotion to Horace, a good modern language scholar, and an admirable after-dinner speaker, while in his more strictly professional capacity he was a sound physician and an admirable lecturer. By the death of the Right Reverend JOHN WALE HICKS, D.D., and M.D. Lond. and Cape of Good Hope, and Bishop of Bloemfontein, both theology and medicine lost a foremost exponent. Dr. HICKS'S death was practically coincident with the breaking out of the war destined to sorely affect the diocese which he served so faithfully. CHARLES JOSEPH ARKLE, M.D., F.R.C.P. Lond., was assistant physician to Charing-cross Hospital and one of the most able of our younger pathologists. REGINALD SOUTHEY, M.D. Oxon., was formerly physician to St. Bartholomew's Hospital and for 15 years a Commissioner in Lunacy. A good physician, well read and of cultured mind, his place will be hard to fill. THOMAS COOKE, F.R.C.S. Eng., had formerly filled the posts of assistant surgeon and Demonstrator of Anatomy at Westminster Hospital, but finally, after a controversy into which there is no need to enter, he founded his own well-known school for the teaching of anatomy. Everyone did not agree with his views as to how anatomy should be taught, but that he was a great teacher is undeniable. We cannot forbear to mention the name of Sir DOUGLAS GALTON, K.C.B., for although not a medical man he did such yeoman service in sanitary matters that we owe it to his memory to record his work in our pages. He was a member of the Army Sanitary Committee from its inception. EDWARD HAMILTON M.D. Dub., F.R.C.S. Irel., was Surgeon-in-Ordinary to the Lord Lieutenant of Ireland. He was also Professor of Surgery in the Royal College of Surgeons in Ireland. Australian medicine is the poorer by the loss of DAVID COLLINGWOOD, M.D., B.S. Lond., F.R.C.S. Eng., late of Summer Hill, Sydney, who for many years was honorary physician to the Prince Alfred Hospital, Sydney, and held other appointments. When in London he was Demonstrator of Anatomy and Practical Surgery at University College. During his residence in New South Wales he not only buil up a very large practice, but endeared himself to his patients and his professional brethren. When he left Australia he seemed in perfect health, but while in England he caught cold and developed pulmonary tubercle. He went to Algeria without benefit, then to Hohenhonnef in Germany, and his brilliant career was finally untimely cut short by a severe hæmorrhage.

In the month of October the Colonial service was deprived of one of its most distinguished members by the death of

PHILIP BURNARD CHENERY AYRES, C.M.G., M.R.C.S. Eng., L.R.C.P. Edin. Educated at University College, London, and Edinburgh, Mr. AYRES, after serving as acting surgeon to Wandsworth Gaol, entered the Colonial service, performing duty in Mauritius, Bengal, and Assam. In 1873 he was appointed Colonial Surgeon and Inspector of Hospitals for the Colony of Hong-Kong, a post he held for 24 years. To him the colony is indebted for its magnificent Civil Hospital. Prominent among provincial consulting physicians stands the name of JOHN THOMAS ARLIDGE, M.D., F.R.C.P. Lond., of Newcastle-under-Lyme. The work of his life was an inquiry into the mortality caused by various occupations, a matter which formed the subject of his Milroy Lectures for 1889, lectures which were afterwards expanded into a book of some 600 pages entitled "The Hygiene, Diseases, and Mortality of Occupations."

Of provincial consulting surgeons a brilliant representative passed away in the person of LAWSON TAIT, F.R.C.S. Eng. and Edin. With his marvellous powers of intuition, his successes, his belief in himself—for the most part fully justified—and his hatred of shams, there is no need to deal further, for they are in the minds of all who know his name. HENRY BENDELACK HEWETSON, M.R.C.S. Eng., was for many years in practice as an aural and ophthalmic surgeon in Leeds and for the last 16 years of his life in charge of these two departments of surgery at the Leeds Infirmary. Time and space fail us to recapitulate the careers of all who have gone from us this year, but we must mention the names of ROBERT FENDICK, M.R.C.S. Eng., of Clifton, who died in his eighty-third year; of PHILIP BROWN, M.D. Aberd., a well-known practitioner in the north; of THOMAS COLE, M.D., F.R.C.P. Lond., M.R.C.S. Eng., of Bath; of EDMUND JOSEPH FURNER, F.R.C.S. Eng., of Brighton; of GEORGE FREDERICK FARR, M.R.C.S. Eng., L.S.A. Lond., a well-known metropolitan police surgeon; of SAMUEL LEONARD CRANE, M.D. Penn., Superintendent Medical Officer of Jamaica; of JAMES WILLIAMSON, M.D. Aberd., of South Shields; of AMBROSE BLITHE VISE, M.R.C.S. Eng., of Holbeach; of WILLIAM SQUIRE, M.D. St. And., F.R.C.P. Lond., a well-known physician and writer on preventive medicine; of JABEZ HOGG, M.R.C.S. Eng., who devoted himself to diseases of the eye and to microscopy; of JOHN DUNCAN, M.A., M.D. Aberd., F.R.C.S. Edin., a well-known and most successful surgeon; of SAMUEL PUNNETT BUDD, M.R.C.S. Eng., L.S.A. Lond., a prominent practitioner in the west of England; of JOHN THOMAS MOULD, F.R.C.S. Eng., a well-known figure in the medical world of Kensington; of CHARLES WILLIAM COOPER, M.B. Cantab., of Leicester; of JOHN WICKHAM BARNES, F.R.C.S. Eng., a noted Poor-law medical officer; of WILLIAM LEWIS, MORGAN, M.A., M.R.C.S. Eng., of Oxford, a surgeon to the Radcliffe Infirmary and coroner to the University. Almost at the close of the year RICHARD THORNE THORNE, M.B., F.R.C.P. Lond., K.C.B., was suddenly called away. His career has been already fully set out in our columns, but we may repeat here our sense of the profound loss which both the State and the medical profession have sustained by the death of so faithful a public servant and so great a master in preventive medicine. Such are those of our calling who have finished their labour here. For them and for ourselves let us bear in mind the noble words of a great Englishman: "Then seeing we are not borne for ourselves but each to help other, and our abilities are much alike at the houre of our birth and the minute of oure death: seeing our good deedes, or our badde by faith in Christ's merits, is all we have to carrie our soules to heaven or hell: seeing honour is our lives' ambition: and our ambition after death to have an honourable memory of our life: and seeing by no means we would be abated of the dignities and glories of our Predecessors let us imitate their virtues to be worthily their successors."

Annotations.

"Ne quid nimis.

THE ORGANISATION OF THE PROFESSION.

IN our issue of Oct. 28th appeared a letter from Dr. S. Crawshaw of Ashton-under-Lyne concerning the proposed conference to be convened by the Manchester Medical Guild to deal with the organisation of the profession. Dr. Crawshaw is the secretary of the Conference Committee and we have received from him copies of the circular letter and prospectus of proceedings which have been sent out to various British medical and ethical societies. First of all comes the choice of a meeting place, and two alternatives are suggested—i.e., London or Manchester. That place which is selected by the larger number of societies will be chosen. Only societies which have already promised to send delegates or are prepared to do so will vote on this question and the voting paper must be returned to Dr. Crawshaw by March 1st, 1900. Matters will be brought before the Conference by means of papers and motions. Papers have already been promised by Mr. Victor Horsley, Mr. George Brown, Mr. Garrett Horder, Dr. T. W. Hime, Dr. Edward Jepson, Dr. Alfred Cox, Mr. Murtaugh Houghton and Mr. R. B. Anderson. Proposed motions must be upon some subject of a medico-ethical or medico-political nature and must have been adopted by the society sending them up as embodying the views of its members. The Conference will in no way attempt to dictate to the profession, but only to formulate opinion. The questions especially proposed for discussion are: Direct Representation on the General Medical Council, Contract Practice, the Midwives Question, Medical Charities and the Representation of the Profession on their Managing Bodies, Medical Education and the One-portal System, the Medical Acts and their Amendment, and the Organisation of the Profession. The Conference is to be held during the first week in May and will probably last three days. A small contribution for expenses will be asked from each member of the societies sending delegates. Any society, however small, may send one delegate, and no society shall send more than four delegates. We wish the Conference every success. The recent Conference at Newcastle-on-Tyne showed that such meetings could be successful, and we hope that this forthcoming one will be even more so.

LOCAL OUTBREAKS OF TYPHOID FEVER IN LAMBETH.

DR. JOSEPH PRIESTLEY, the medical officer of health of Lambeth, has issued a very interesting report upon certain outbreaks of typhoid fever which have recently occurred in Lambeth. The outbreaks were three in number and appear to offer evidence of the spread of the disease by personal contact or infection of food by the sick as apart from any general infection of water, milk, or shell-fish. The first group of cases commenced with a woman, aged 37 years, who was taken ill with an obscure form of fever which eventually proved to be typhoid. This was notified as such after a few weeks and the usual precautions were then taken, but in the meantime the disease had spread (1) to a female child, aged 10 years, living in the same house; (2) to a boy and a girl, aged respectively four and a half years and 11 years, living in the opposite house, and through the boy to a young man, aged 17 years, a brother, the two sleeping together; and (3) to a woman, aged 30 years, a friend of the original patient who lived two doors off. All the patients were removed to hospital and the houses were thoroughly disinfected. No more cases occurred, although the court was

very crowded, containing 14 houses with a population of 132 persons in 56 rooms. The exact source of the first case could not be traced. Group 2 started with a man, aged 22 years, whose disease was not recognised for three or four weeks. In that time there had been infected (1) a lodger in the same house; (2) a sister in a street close by; (3) a friend five doors away in the same street; (4) another friend in the street who infected his daughter; and (5) probably two other persons in the same street. All these patients were removed to hospital and the houses were disinfected with the result that no fresh cases occurred. No definite intercommunication could be obtained between the cases comprising Group 1 and those comprising Group 2, save possibly in the local public-house. Group 3 commenced with a man, aged 26 years, who died without his disease being recognised and whose bedding, clothes, and other articles were taken both during his illness and after death to his mother-in-law's house to be washed. The result was that his mother-in-law was infected, as were her son and daughter living in the same house, while the daughter infected a friend's child living next door. After the patient's death his wife went to her mother's house and there was infected. There was also infected a boy who was a schoolmate of the patient's brother-in-law and who lived in the same street. In none of the three groups could any infection be traced to milk, water, or shell-fish. Dr. Priestley considers, therefore, that the disease spread either by direct contact or indirectly through infected food, clothing, or bedding. It will be noted that in all three groups the disease in the original case was either not diagnosed until after death or else not until the fever had run a course of from three to four weeks. Dr. Priestley points out that in all cases of doubt the Widal test will clear the matter up after the first week and that the vestry of Lambeth has provided medical men with facilities for carrying out this test free of charge. The report closes with a table of dates which seems to show that in cases of direct contact infection the incubation period may be as short as eight days.

A QUESTION OF PARTNERSHIP.

A CASE was heard in the Chancery Courts of Lancashire on Dec. 20th where Mr. John Grimshaw, M.R.C.S. Eng., of Leckonby sued Mr. Thomas Fisher, M.R.C.S. Eng., of Great Eccleston for a declaration that a partnership existed between the plaintiff and the defendant from Jan. 1st, 1899. Counsel for the plaintiff showed that the plaintiff was an assistant to the defendant in 1892 for some six months and afterwards set up for himself in Fleetwood. Plaintiff occasionally assisted defendant after having set up for himself, and in May, 1898, plaintiff and defendant discussed the question of entering into partnership. In August, 1898, the parties agreed that Mr. Grimshaw should acquire a third share in Mr. Fisher's practice for one year's purchase. Mr. Grimshaw then, at Mr. Fisher's request, passed the examination for the degree of M.B. at the University of London, and returned to Great Eccleston, in November, 1898, taking his share in the work of the practice. The partnership was to be treated as commencing upon Jan. 1st, 1899, but Mr. Grimshaw was to be paid as from November, 1898, on the partnership basis. No deed of partnership was drawn up until April, 1899, and then Mr. Grimshaw found the terms so different from those proposed in August, 1898, that he refused to sign it. Eventually, in August, 1899, the parties agreed to separate. Counsel for the defence contended that Mr. Grimshaw was only an assistant and that although it was intended that he should become a partner if terms could be arranged, yet that the parties never could come to terms. Eventually an agreement was arrived at whereby defendant undertook to pay plaintiff £250 for services from Jan. 1st to August 28th, 1899. He also undertook to discontinue the action for libel against plaintiff who on his part apologised and undertook to withdraw the charge against Mr. Fisher. Each party was to pay his own costs. This result is, we think, as fair a one as could have been arrived at, and the obvious moral of the case is that no business arrangements should be entered into between medical men without a duly drawn and signed agreement. Had this simple precaution been observed we should have been spared the spectacle of two medical men quarrelling in the courts and the purses of the said medical men would be appreciably heavier.

CONSULTING SURGEONS TO THE FORCES IN SOUTH AFRICA.

Sir William Stokes, surgeon to the Queen in Ireland, and Mr. Kendal Franks, M.D. Dub., F.R.C.S. Irel., have been nominated by the Secretary of State for War, as consulting surgeons to the forces in South Africa. Sir William Stokes will shortly leave Dublin for the seat of war. Mr. W. Watson Cheyne, F.R.C.S. Eng., F.R.S., Professor of Surgery at King's College Hospital, and Mr. George L. Cheatle, F.R.C.S. Eng., assistant surgeon at King's College Hospital, have also been appointed consulting surgeons to the forces in South Africa. Mr. F. A. Hadley, house surgeon at the same hospital, has volunteered his services in this connexion.

"POLYMORPHOUS PLEURISIES."

AT the meeting of the Société Médicale des Hôpitaux of Paris on Nov. 24th Dr. Galliard read an important paper on "Polymorphous Pleurisies"—encysted collections of different kinds of effusions in the same pleura. The effusions are macroscopically polymorphous when the contents of the different cavities are different to the naked eye—limpid serum, turbid or sanguineous serum, blood, pus, chylous fluid, gelatinous substance, &c. They are bacteriologically polymorphous when the cavities are infected by different microbes—pneumococci, streptococci, staphylococci, &c. The subject is of practical importance, for a serous effusion may be punctured whilst in the same pleura an empyema is overlooked, or *vice versâ*. The septa which separate the cavities may run horizontally, vertically, obliquely, or irregularly. Supposing a multilocular sero-fibrinous pleurisy to exist it may become polymorphous in two ways. Microbes may be introduced in puncturing one of the loculi—a common event in pre-antiseptic days—or they may be conveyed by the circulation. Dr. Galliard cited a number of cases (17) from medical literature illustrating the different combinations which occur in polymorphous pleurisies. The following case under his own care has not been previously published. A man, aged 54 years, had phthisis. On the left side in front from the second to the fifth ribs there were dulness and absence of vocal fremitus and respiratory murmur. Aspiration in the fourth space gave exit to 32 cubic centimetres of pus containing ordinary cocci. Pleurotomy revealed a large cavity. A week later signs of effusion were observed at the left base behind. Puncture with a Pravaz syringe gave exit to serous fluid. A week later the empyema dressings were found soaked with serous effusion. The dorsal effusion had spontaneously discharged itself. Signs of pneumothorax developed, and the patient, who had been failing for some time, died. At the necropsy a large cavity, divided into two compartments by an almost vertical fibrous septum, was found in the thorax on the left side. In the septum was an opening which allowed liquids to pass from one compartment to the other. Both compartments contained pus. Multilocular pleurisy, whether monomorphous or polymorphous, can be diagnosed only by multiple exploratory

punctures. A long fine needle and a Pravaz syringe should be used, and all antiseptic precautions should be observed. Encysted serous fluid adjacent to an empyema should be completely evacuated as soon as diagnosed because it was always exposed to infection.

THE PLAGUE IN RELATION TO CLIMATE.

MR. BALDWIN LATHAM, M.Inst.C.E., at the last meeting of the Royal Meteorological Society read a paper on the Climatic Conditions Necessary for the Propagation and Spread of Plague. The bubonic plague he said to be primarily due to a specific organism or microbe of infinitesimal size, so small that probably 250,000,000 of them would be required to cover a square inch of surface. Plague was infectious and contagious and was greatly influenced by pestilential emanations from polluted and waterlogged soils. Mr. Latham gave accounts of various outbreaks of plague in this country and in other countries, including the Great Plague of London in 1665, when 7165 deaths were recorded in one week in September. "Plague," he continued, "is undoubtedly a disease of the poor and attacks most readily those living on a low diet. The conditions which are conducive to the spread of plague are identical with those which give rise to the escape of malaria from the ground. That the ground itself exercises an enormous influence upon plague is shown by the fact that in all the epidemics persons living on the ground floors suffer to a much greater extent than those who live in the higher storeys of the houses." Mr. Latham thought that there could not be a doubt that the conditions which ordinarily produced evaporation from water or land surfaces were identical with those which produced exhalations from the ground; and these exhalations consisted largely of vapour of water carrying matters injurious to health with them. He discussed the meteorological observations made at the Colaba Observatory, Bombay, and compared them with the number of deaths from plague during the recent epidemics in Bombay, and said that if the temperature of the air increased beyond the temperature of the ground, so that its dew-point was above the temperature of the ground, condensation took place instead of evaporation. To this increased high temperature Mr. Latham attributed the sudden stoppage of plague after a certain high temperature had been reached, which by raising the temperature of the dew-point prevented exhalation from the ground and caused condensation to take place instead of evaporation. Conversely a sudden fall of temperature caused plague to arise, for a fall of temperature meant that the temperature of the dew-point must fall and the tensional difference between a low dew-point and a high ground temperature would at once lead to exhalations escaping in large quantities from the ground and so to the liberation of the plague bacillus, accompanied with the exhalations necessary for its development.

THE PROTEOLYTIC ACTION OF PANCREATIC JUICE.

THE action of the pancreatic juice upon proteids is rightly regarded as associated with an alkaline medium. Thus, Halliburton in the last edition of Kirkes' Physiology, remarks that trypsin acts like pepsin but with the following amongst other differences: trypsin acts in an alkaline medium, but pepsin in an acid medium. Recent experiments, however, by Mr. B. K. Rachford, the results of which are recorded in the November number of the *Journal of Physiology*, have an interesting bearing on this statement. Mr. Rachford obtained the pancreatic juice from rabbits, and to determine its solvent power he employed purified and dried blood fibrin, weighing the fibrin before and after the action of the juice had been exercised upon it. In some preliminary experiments he found, in opposition to Messrs. Chittenden and Albro, that when fresh rabbits' bile is added to the fresh pancreatic juice of the same animal the proteolytic power of the juice acting on neutral fibrin is stimulated to a marked degree. In most of the experiments the juice was able to do one-fourth more work by reason of the presence of the bile, which is entirely in favour of the value of alkalinity in promoting the action of the pancreatic juice. The presence of bile seems to limit bacterial action or the action of organised ferments on the albuminous fermentations. But when fibrin or other proteid is ingested into the stomach it combines with a certain proportion of hydrochloric acid, and Mr. Rachford, in endeavouring to determine the effects of the addition of hydrochloric acid outside the body, found that when fibrin was one-half saturated with hydrochloric acid (no free hydrochloric acid being present) it was as readily acted upon by pancreatic juice as is neutral fibrin. When, however, the fibrin was nine-tenths saturated with hydrochloric acid the proteolytic action of the juice was retarded, whence the conclusion may be drawn that the acidification of the proteid by the acid of the gastric juice to a certain moderate extent does not interfere with the action of the pancreatic juice, though when it is fully saturated the action is impaired. From all the evidence which Mr. Rachford has been able to obtain he has been led to believe that the conditions which prevail throughout the small intestine in carnivorous animals are everywhere favourable to the proteolytic action of pancreatic juice.

THE DIAGNOSIS OF TYPHOID FEVER.

THE address of Professor Osler on this subject delivered before the New York Medical Association on Oct. 25th is, like most of his work, replete with valuable teaching. The protean character of typhoid fever gives rise to great difficulties in diagnosis which, however, the Widal test is now most useful in overcoming. Dr. Osler described cases of illness, which he met with every autumn, of from five to eight or 10 days' duration, characterised by slight fever and gastro-intestinal disturbance, indicated by furred tongue and diarrhœa, or quite as frequently by constipation. Perhaps on deep palpation the edge of the spleen was felt. The appearance of a few rose spots might clear up the diagnosis in such cases, but in their absence only the Widal test could distinguish simple continued from mild typhoid fever. At the other extreme was "acute typhoid septicæmia," in which there was evidence of an acute infection of great severity without localising symptoms. For a week or 10 days the picture of a profound toxæmia with high fever and early delirium was presented. Death might occur before a diagnosis could be made; even the Widal reaction might be absent. The necropsy might show characteristic intestinal lesions, but sometimes these were entirely absent and only bacteriological examination proved the disease to be typhoid fever. Again, pronounced localisation of the infection in parts other than the intestines might throw the practitioner completely off his guard. Agonising headache, severe neuralgia, delirium, or even furious mania, might be the first symptoms. Widespread bronchitis, acute pleurisy, pneumonia, or nephritis, might mask the nature of the disease. The presence of chills might lead to error; if they were repeated malarial fever was liable to be diagnosed. On this point two rules were of great importance: (1) an intermittent fever which resisted quinine was not malarial; and (2) in those localities where the æstivo-autumnal organism did not prevail a continued fever was not malarial. For variability of onset, course, and symptoms and for complexity in manifestations, æstivo-autumnal fever took precedence even of typhoid fever. Early anæmia with a sallow complexion was suggestive of malarial fever. The

discovery of the malarial parasite in the blood was decisive. But the parasite of æstivo-autumnal fevers was in the acute stages less easily recognised than the larger tertian form, and, moreover, it might be very scanty. Combined typhoid and malarial infection Dr. Osler believed to be very rare. In the Johns Hopkins Hospital in 10 years only one case was met with in nearly 1000 cases of typhoid fever. When it occurred quinine eliminated the malarial factor and allowed the typhoid fever to run its course.

THE WORKMEN'S COMPENSATION ACT.

THE Workmen's Compensation Act, 1897, is one of peculiar interest to the medical profession, inasmuch that, in the first place, it would have utterly failed but for the strong sense of honour and duty held by the thousands of medical practitioners who have been applied to for certificates by workmen more or less injured; secondly, because its working bristles with medical and surgical questions incomprehensible to the lay mind; and thirdly, because in its inception it created a new class of practitioners who were intended to be the ultimate arbiters of questions of medical fact. The act, however, has not produced the effect contemplated by its framers in reducing litigation, for outside the legal points there has always been the medical aspect, which the lay arbitrator or judge has not had the training necessary for appreciation, and there being no compulsion, he has, as a rule, not seen fit to call in the experts provided by the Act. By a recent decision of the Court of Appeal the Act has been endowed with the most far-reaching consequences and if not amended at an early date will become a burning question to classes not originally touched by it. It has been held that employers must not only pay compensation for the effects of accidental injury, but also for any pre-existing weakness or disease which may be unfavourably influenced by the accident. This can only have one result. Employers will insist on a stringent periodical medical examination of their workmen with resulting wholesale discharges of the physically unfit; the rates will be burdened with the support of thousands well able to work, but not in the perfect health necessary for them to pass a medical examination. To our mind the matter stands thus. The medical assessment should be made obligatory and not left permissive. A law should never say "may" or "should," but always "must" or "shall." Also, medical referees should be really assessors and should by no means have anything to do with general practice in the district. As we have often pointed out in commenting on the appointment of county medical officers of health, any medical man who is placed in a position in which he may have to traverse the opinions of other medical men should never be in a position of rivalry to them. Probably the best way would be for State experts to be appointed under the Act who should do no other work than assist to adjudicate upon claims. But if the question of expense stands in the way of this, as it is evident that only really good men with large experience should be appointed, then the medical assessors should certainly be drawn from the ranks of consultants, who should be permanently appointed with a retaining salary and fees sufficiently liberal to attract the best men. Concerning the payment of certificates by the Home Office sent in with statements of claim we are not so certain as to whether payment by the Home Office might not open the door to fraud. In any case strict supervision would be required to obviate this—supervision exercised by a medical staff experienced in the working of the Act and appointed by the Home Secretary to protect both the public and employers. The patient might be made to pay for his own certificate of statement of claim, and if the case were decided in his favour he could be reimbursed by the losing side. But in this democratic age this may be impossible. It seems to us to be absolutely fair, but we fully understand that great difficulties would probably arise in attempting to pass a Bill with this proviso. The labour Members in the House and those Members representing large labour constituencies would certainly oppose it, and on the whole we think that the Government would meet with less opposition in proposing a well-considered scheme for payment of the fees by the Home Office.

A CONSTITUENT OF LYDDITE IN MILK.

CONSIDERABLE speculation has been made as to the composition of lyddite. As a matter of fact its preparation is, we believe, a Government secret, though it is generally known amongst experts on explosives that it consists largely of melted picric acid. That this is not the complete story of the composition of lyddite is, however, clear from (oddly as it may seem) some evidence given last week before the committee now making inquiry into the use of colouring matters and preservatives in food. In the course of this evidence one witness admitted that yellow colouring matters were largely purchased without the slightest discrimination for the purpose of giving a richness of appearance to milk and milk products. As a rule no question was asked as to the injurious or non-injurious character of the dye so used. One of the best colouring matters for the purpose appeared to be Martius' yellow—known also under the names of naphthol-yellow, naphthalene yellow, Manchester yellow, saffron yellow, and golden yellow. Chemically this substance is dinitro-alpha-naphthol which is prepared by a series of chemical operations from naphthalene, the substance which crystallises in gas mains. The principal chemist of the Government Laboratory assured the witness that this was an important constituent in the making of lyddite. Martius' yellow is itself slightly explosive when heated, but, of course, no alarm need be raised on this account when it becomes known that it is used in milk and milk products to impart to them a rich creamy colour. Physiological experiments, however, have shown that Martius' yellow is an extremely injurious colouring matter and should be wholly prohibited. Further, it may lead to highly injurious results by merely coming into contact with an abrasion of the skin. It would appear that the trade employing colouring matters in food are rarely acquainted with the poisonous properties that characterise many of these artificial substances, and accordingly they ask no questions upon this point. Strong tinctorial power is all they desire without any reference to the probable poisonous nature of the colouring matter. This state of things emphasises the importance of the present Government inquiry, and we may feel sure that a very definite pronouncement on a revelation of this character will be one of the features in the conclusions of this committee's report.

THE death was announced on Dec. 23rd of Mr. William Cadge, F.R.C.S. Eng., the well-known surgeon of Norwich. We are glad to say, however, that this report was unfounded and was contradicted in the *Times* of Dec. 25th.

QUEEN VICTORIA CONVALESCENT HOME, BRISTOL.—At a meeting of the governors of this institution held on Dec. 20th it was decided that a ward should be named the "Lord Mayor's Ward." It is thought that a substantial contribution will be received from the Lord Mayor's Fund as a surplus of the Royal Reception Committee. It was decided that any application for admission on behalf of sick and wounded soldiers would be favourably entertained. At present about 20 beds are occupied and in a short time the number will be increased to nearly 50.

THE WAR IN SOUTH AFRICA.

No one can read the accounts descriptive of the attitude of the nation under the misfortunes which have temporarily gathered around its forces operating in South Africa without feeling a glow of pride and admiration at the exhibition of national spirit which has been evoked. The enthusiastic response on the part of the volunteer forces—and indeed that of all classes of society—to the call made upon them has been singularly impressive. Notwithstanding that it has been so frequently said as to have become a platitude, the assertion that there are worse things than war has just been emphatically endorsed by the national verdict. What we have to do is to defeat a big conspiracy and rebellion against the British power in South Africa. Owing to the vacillation on the part of the past governments of this country and to a mistaken policy of so-called magnanimity, together with a too patient pursuit of our sincere desire to maintain peace, the Republican Governments of South Africa had formed the idea that our conduct was simply the outcome of weakness and fear and that the time had come when they could successfully carry out their secretly prepared schemes for organising a big Republic in South Africa which should dominate all outside it. This country has simply been hoodwinked and what has been prophesied from the time of Sir Bartle Frere has come to pass and found us unprepared and placed at an enormous disadvantage. There must have been a good deal of blundering somewhere for matters to have reached their present condition. The Boer Government has been allowed to go on arming with apparent impunity, although it could only mean a menace to this country. People naturally ask why that Government was not years ago asked for an explanation of the fact and, if the reasons were unsatisfactory, why measures were not at once taken to greatly increase the British garrison in South Africa? The introduction of the most modern arms of precision, long range rifles and artillery, and smokeless powder, of all of which the Transvaal Government had large stores, together with their adoption of a very astute system of tactics admirably adapted to defensive warfare, has placed our foes in the most favourable condition for the attainment of the object which they have in view. To this must be added the extent and difficult nature of the country, the great numerical superiority and mobility of the Boer forces, and their application of comparatively new methods of warfare. To carry entrenched positions is always attended with a great number of casualties, particularly where trenches are sinuous like a horizontally placed letter S and have the effect of completely concealing their occupants from view, while the latter refuse to be "drawn" until an opportune time arrives for themselves to fire on their enemies. This circumstance explains the difficult nature of the military operations in which British infantry and artillery have been engaged to their cost in South Africa and can be readily understood. It must be remembered that the South African Republics from the first knew their own mind as well as the country in which they were operating and had been long preparing for all the eventualities of this war, while the British troops on their arrival at the Cape found themselves in the presence of a new and altogether exceptional condition of affairs which probably for the time being frustrated any attempts to carry out any preconcerted plans of the campaign. Flanking movements, except with a large superiority of force, are, we understand, extremely dangerous military expedients against a well-armed enemy, and frontal attacks on an entrenched force always entail, as we have said, severe losses. In the Franco-German war, to cite a modern example, the Germans lost enormously at St. Privat.

But the end is not yet and there is no substantial ground for doubting that it must, even to take the worst view, eventually be favourable to this country, for the simple reason that in the long run the advantage will be with the combatant who has the sea open with practically unlimited resources of men, munitions of war, and supplies, whereas the Boers are using up, and must eventually reach the end of, all their resources in these respects. A preponderating force of artillery on our part and the continued shelling of the Boer positions with lyddite and shrapnel without regard to the amount of ammunition expended until it becomes physically impossible to hold them, combined with an invasion of the Transvaal by an overwhelming and mobile force with plenty of artillery and

FIELD FORCE IN SERVICE ABROAD.

*Table Showing Officers, Royal Army Medical Corps, established for Regimental Units.**

Unit.	Place of mobilisation.	Medical officer.	District of medical officers.
7TH INFANTRY DIVISION.			
14TH BRIGADE.			
2nd Bn. Norfolk Regiment.	Aldershot...	Major S. Hickson.	Western.
2nd Bn. Lincolnshire Regiment.	"	Major A. A. Sutton.	"
1st Bn. King's Own Scottish Borderers.	"	Lieutenant A. MacLaughlin.	Netley.
2nd Bn. Hampshire Regiment.	"	Lieutenant F. H. Merry,	"
15TH BRIGADE.			
2nd Bn. Cheshire Regiment.	Aldershot...	Major W. H. Pinches.	Curragh.
1st Bn. East Lancashire Regiment.	"	Major H. T. Baylor.	Cork.
2nd Bn. South Wales Borderers.	"	Lieutenant C. S. Smith.	Netley.
2nd Bn. North Staffordshire Regiment.	"	Lieutenant C. R. Evans.	"
DIVISIONAL TROOPS.			
Brigade Division Staff, Royal Field Artillery (83rd, 84th, and 85th Batteries).	Aldershot...	Lieutenant A. J. M. Cuddon-Fletcher.	Netley.
Regimental Staff, Divisional Engineers (9th Company, Royal Engineers).	Chatham ...	Lieutenant R. L. Davies.	"

* The following unit, to which a medical officer is allotted in w establishments, will not have one detailed in the present instance:—Divisional Supply Column. The general officer concerned will make the necessary arrangements for its medical charge.

Table showing the Officers of the Royal Army Medical Corps detailed to Bearer Companies and Field Hospitals.

Unit and allotment in the field force.	Place of mobilisation.	Names of officers.	Districts, &c., from whence obtained.
		A.—BEARER COMPANIES.	
No. 7 Bearer Company (14th Brigade).	Aldershot...	Major C. E. Faunce.	Woolwich.
		Captain C. R. G. Stalkartt.	"
		Lieutenant J. A. Hartigan.	Netley.
No. 19 Bearer Company (15th Brigade).	Aldershot...	Major L. R. Colledge.	Southern.
		Lieutenant R. E. G. Phillips.	Home.
		Lieutenant W. C. Croly.	Netley.
		B.—FIELD HOSPITALS.	
2nd Cavalry Brigade Field Hospital (14th Brigade).	Aldershot...	Major D. F. Franklin.	Aldershot.
		Major H. A. Cummins.	Woolwich.
		Lieutenant A. H. Safford.	Netley.
		Civil Surgeon R. W. Collum.	
		Quartermaster and Hon. Lieutenant.*	
5th Divisional Field Hospital (15th Brigade).	Aldershot...	Major G. Wilson.	Thames.
		Major T. G. Lavie.	Dublin.
		Lieutenant J. M. Buist.	Netley.
		Civil Surgeon W. L. Hatch.	
		Quartermaster and Hon. Lieutenant.*	
4th Divisional Field Hospital (Divisional Troops), 7th Division.	Aldershot...	Major R. H. S. Sawyer.	Dublin.
		Major G. Raymond.	Cork.
		Lieutenant J. F. Martin.	Netley.
		Civil Surgeon J. A. Barnes.	
		Quartermaster and Hon. Lieutenant.	

* join the unit on its arrival in South Africa.

irregular cavalry—such as this country and its colonies are sending out—will give a new and very different aspect to the state of things existing at the present time. We have dwelt upon these points because the war in which we are engaged is of paramount importance to this country and concerns everybody. It is in the cause of justice, liberty, the equality of rights for all, and the progress of civilisation; and there is not a State in Europe that is not in reality interested and concerned—a fact which will be ultimately recognised, for their subjects and the Boers themselves will one day reap the benefit of a new and better condition of things in South Africa.

Turning, however, to matters of a more purely medical nature we may say that, speaking generally, the army in South Africa is healthy and in excellent fettle. At Ladysmith the latest intelligence informs us that there are sufficient supplies of food and ammunition to enable the garrison to hold out for some time yet. The troops are healthy and the wounded are doing well, but enteric fever and dysentery are, we regret to say, somewhat prevalent. There have been several deaths from the former disease.

We have previously alluded to the present bearer system as being probably the best one yet devised for promptly and systematically stripping the battlefield of its wounded. Sir William MacCormac has reported, we understand, that the Colenso battlefield was clear of wounded at 5 P.M. All of our wounded are doing well at Sterkstroom. A large number of patients have arrived at Durban from the forces in front and the hospitals at that station are filling up; all overcrowding will be obviated, however, by the method of embarking such invalids as are not likely to recover soon on board hospital ships and transports for England.

Her Majesty's chartered transport *Kildonan Castle* arrived at Southampton on Dec. 25th from Cape Town, bringing 24 soldiers' wives, 43 children, 94 invalids and wounded of various corps, 19 prisoners, 22 men on duty service, and a few details. Hot soup and food, blankets, and clothing were freely distributed. The men also received a liberal supply of tobacco and cigarettes each. Free telegrams to relatives from the same fund, on compliance with certain regulations, were also largely taken advantage of. Whilst those women and children who were unable to get to their destinations were accommodated at an hotel, the invalids were sent to Netley by special train. The sick and injured bluejackets and marines were transhipped in the Solent into the special service steamer *Magnet*, which went out from Portsmouth Harbour for the purpose, and thence were removed to Haslar Royal Naval Hospital for treatment.

We are glad to state that all the reports which we get give an excellent account of the work which the medical officers are doing in the field and at the various war hospitals. One correspondent mentions that, although there was no Roentgen ray apparatus at Estcourt several splendid and successful operations have been performed in the sanatorium and convent, which has been converted into the chief hospital. One man who had been shot through the abdomen, the intestines being perforated, was so treated that he is now in a fair way to recovery. We hope that there is a good supply of the Roentgen ray apparatus, so as to have it available at the different army hospitals, and we may add that, wherever practicable, advantage should be taken of the electric light by introducing it into operating-rooms. It is extremely useful in the practice of modern surgery.

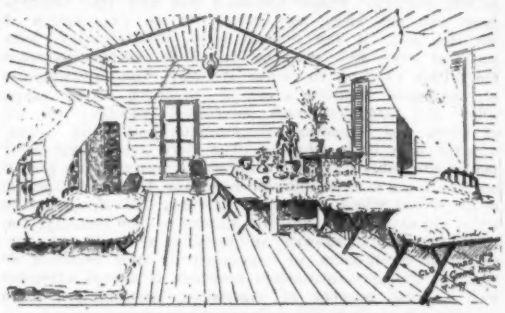
We may conclude this article by calling attention to an interesting communication from Mr. Stonham which appeared in the *Times* of Dec. 28th. With its tone of just appreciation of the high professional qualifications and zeal exhibited by many medical officers we entirely concur, and it is needless to add that we likewise share in the writer's desire to obtain for medical officers generally a sufficient amount of leave to enable them to keep abreast practically with the progress of surgery in order to maintain a high standard of professional efficiency in the service generally.

We give on p. 1853 a detailed list of the additional officers of the Royal Army Medical Corps under orders for service in South Africa.

(FROM OUR WAR CORRESPONDENT.)

Nov. 26th.—I am at No. 1 General Hospital to-day, and learn from Colonel Grier, R.A.M.C., who has kindly placed his registers at my disposal, that the admissions and discharges up to the 25th are as follows. Officers' ward: surgical cases admitted 18; of these 10 have been discharged. Medical cases: two admitted; neither of these have as yet been discharged. There have been 462 non-commissioned officers and privates admitted on the surgical side and 112 on the medical side; total 574. Of these 166 have been discharged. It must, however, be borne in mind that amongst the men's cases very many are due to syphilis or other venereal disease. There are only a few enteric cases; one is very serious. The remaining enteric fever cases are all doing well. On news arriving of the great battle fought near Belmont, of which you have long ere this received intimation by telegraph, hospital trains were at once despatched and have returned bringing down many wounded men who fell at the terrible affair of the Modder River engagement. The first of these reached Wynberg on Sunday, the 27th, and detrained 17 officers and 83 non-commissioned officers and men. A second train arrived on the 29th, bringing four officers and 45 men of the rank and file. On the 30th one officer, 86 men, and two Boers were received; on Nov. 2nd a fourth batch of 108 and on the 3rd 128 more arrived. I may mention that all these poor fellows are much more severely wounded than others spoken of in a former letter. These gunshot wounds have been produced by a much larger bullet than the Mauser.

Dec. 5th.—No. 1 General Hospital, as may well be supposed, is now quite full; 100 surplus cases have been placed in No. 2 General Hospital (mostly tents), and accommodation for some 200 more has been arranged for there, as several batches of wounded are expected from the front in a day or so's time. There are in No. 2 General Hospital very many serious cases. Three or four men have



Interior of No. 2 Medical Ward, General Hospital, Wynberg.

been shot through their backs. These cases are practically of a hopeless nature from the paralysis which has resulted. Trephining has been performed in cases of gunshot wounds of the head, whilst three amputations have had to be performed since the one referred to in my former communication.

The hospital train previously announced by me as bringing down the wounded from the front consists of an engine and several carriages (converted third-class cars and guards' vans); it is capable of performing the journey to the Modder River and back in about 76 hours, including necessary stoppages. The carriages are united on the corridor principle and each one is about 32 feet long and seven feet six inches wide inside. On either side are three pairs of cots affording accommodation for 12 persons. All these cots are hung on strong spiral metal springs in order to lessen as much as possible jolting. The perpendicular upright on which the crossbars carrying the springs rest can at any moment be detached so as to admit of the easy introduction of, and removal of the stretchers from, the carriages. The inside of the coaches is painted a light grey, the outside is brightly varnished, every vehicle bearing the distinguishing mark of a large red cross on an ovoid white ground. In one of the rearmost vans is a completely arranged kitchen with a large cooking range, together with an extensive assortment of culinary utensils. Adjoining this there is a capitally equipped surgery, containing bottle rack, plenty of medicines, hot and cold water-supply, instruments, bandages, towels, &c., in fact, everything ready and to hand for the surgeon's use when returning from the front with his disabled charges. There are several wash-up places and latrines on the open-pipe system; the excreta fall through the pipe on to the permanent way. The cots' bottoms are made of strong No. 1 canvass and upon these are laid well-made mattresses, some

filled with horsehair and others with clean flock. Certain portions of these carriages are partitioned off by green rep curtains for the use and privacy of officers. Some of the mattresses have a hole in their centre which can be closed when not required by a well-fitting pad. These special beds are intended for dysenteric patients' use. 300 gallons of pure fresh water are carried in strong cube-shaped metal tanks beneath the floor of the carriages. In addition there are cupboards, linen-chests, plate-racks, cot-lockers, soiled-linen bins, bottle and glass shelves; in fact, a host of minor necessaries far too varied to mention. The whole turn-out is excellent and reflects immense credit on the authorities, the time taken in the conversion—namely, three weeks—having been remarkably short. As I may shortly be going up to the front fighting line in one of these special trains I must defer any further remarks concerning them until I have returned.

(FROM OUR SPECIAL CORRESPONDENT AT THE BASE.)

THIS week has brought us the heaviest work we have had up to the present, as in addition to the wounded from Modder River the *Spartan* brought down over 100 sick and wounded from the Natal side.

The cases that came down from Modder River are the most severely wounded that we have had during the campaign, the diversity of weapons used by the Free State Boers accounting for this in a great number of cases that went to No. 2 General Hospital, and amongst the Highland regiments in particular spinal wounds have been most frequent, and as far as I can ascertain from the men themselves they attribute this to the target that their kilts make when lying down, thus causing them to be picked out before other regiments who have no distinguishing colour. Operations of all sorts have, of course, been frequent during the week, and with the exception of one or two very bad compound fractures of the thigh have been so far successful and progressing well. I regret to have to chronicle the death of Lieutenant Leslie of the Grenadier Guards. He was sent down with a compound comminuted fracture of both bones of the right leg and a laceration of the posterior tibial artery. Amputation was performed through the knee-joint and he seemed to be progressing favourably for 24 hours, but the extensive hæmorrhage that he must have had when wounded told on him and he never really rallied and died from shock. Major Hamilton Dalrymple's arm was amputated at the elbow and he is doing well. Mr. Knight, the correspondent of the *Morning Post*, has also lost his arm, amputation at the shoulder-joint having become necessary. In all these cases the bone was shattered and the shaft split, the wounds having been caused in each case by Martini bullets. In the surgical division the cases of trephining done last week are progressing in a wonderful manner, and when we come to consider the amount of splinters and depressed bone it was absolutely necessary to remove it is little short of marvellous to record the progress these cases have made. As regards the compound fractures of the femur the cases operated on have not done quite so well, but when the extent of the shattering of bone and the injuries to soft structures are taken into account we can congratulate ourselves that we have been able to save life at the expense of limb. No. 2 General Hospital is now equipped and open for work, and there is little doubt but that in a few days, when the advance on Kimberley, Bloemfontein, and Ladysmith takes place, every available bed will be necessary, as the fighting at these points will be very severe. No. 3 is to be established at Rondebosch, about four miles between this and Cape Town, and the work of pitching tents and equipping is actively proceeding. When they are complete we shall be able to provide in the three general hospitals for upwards of 1600 patients, and with the hospital ships and transports leaving for Netley every week no difficulty ought to be experienced in coping with the number of wounded sent down. The ambulance trains are working wonderfully well and all the patients speak most highly of their comfort and equipment. As I have already told you, two medical officers and two nursing sisters accompany each train. The action of the Boers in throwing their dead into the Modder River after last week's engagements cannot too strongly be condemned, as I understand the water-supply for several townships and villages is drawn from this source. It is to be hoped that strong measures will be taken to prevent a recurrence of this practice in future, which of course is contrary to all rules of civilised warfare. We had a visit from Mr. Treves last week and he was good enough to give us his able assistance and advice in a number of cases. He left for Natal after a few days' stay here and we are looking forward to hearing that he has been successful in the branch of abdominal surgery which he intends to make his special object during the campaign. Sir William Mac Cormac will return to this side in a few days, so that we shall have a consulting surgeon at each point, as Mr. Makins is with Lord Methuen's force at the Modder River.

The *Kildonan Castle* takes home a lot of sick and wounded to-morrow for Netley, and by the time they arrive they ought to be on the high road to convalescence. We are quite full up in No. 1 now, our numbers being nearly 627 non-commissioned officers and men and 25 officers, all of whom at the time of writing are doing well.

Wynberg, Dec. 12th, 1899.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Manchester Sanitary District.—Dr. Niven's annual volume seems to be growing in bulk year by year, but the thoroughness of his work is such that while we gladly welcome all his contributions we regret that we cannot here devote as much space to them as we could wish. The Registrar-General's estimate of the population of Manchester at 541,296 is, Dr. Niven thinks, probably under the mark, and hence if this be so the birth-rate of 32·3 per 1000 and the death-rate of 21·2 per 1000 are too high. In the light of its corrected death-rate for 1898, 24·80 per 1000, Manchester was behind all the other 32 great towns with the exception of Salford and Liverpool, which yielded respectively rates of 25·52 and 26·33 per 1000. With, however, the exception of diarrhœa the death-rate of Manchester from all the common zymotic diseases was below that of the 33 great towns, but the excess from diarrhœa was so heavy that the total zymotic mortality was considerably above that of the 33 great towns; and the medical officer of health observes that in spite of all their administrative methods they have not been able to reach the causes of infantile mortality. The mortality of the several districts of Manchester is carefully gone into by Dr. Niven, and there seems good prospect that useful lessons will ultimately be learnt from this detailed study. In connexion with scarlet fever the researches of recent years into the relation of this disease to insanitary conditions—notably soil pollution—have been continued, and it is interesting to learn that the midden-provided districts are those which show the greatest tendency to the recurrences of a high scarlet fever attack-rate. The result of the year's work as to scarlet fever also teaches that when there is but little pressure upon the isolation accommodation and the patients can be passed through the convalescent wards with the usual precautions as to bathing, inunction, and the syringing of nostrils, "return" cases are of very rare occurrence. When, however, over-pressure comes and these precautions have of necessity to be relaxed the percentage of return cases increases. The evidence, in fact, points to the necessity of the additions to the fever hospital which are at the present time in progress. We are glad, too, to hear that a separate small-pox hospital, as also a disinfecting station, are among the prospects of the near future. The influence of schools in aiding to diffuse scarlet fever is well illustrated in the report before us and the manner in which the disease tends to remain limited to one department of a school is brought out. Of enteric fever there was a marked increase in the fourth quarter of the year, there having been a sudden leap up in the number of cases in the week ending Sept. 3rd, an almost simultaneous increase having also taken place in connexion with summer diarrhœa. Commenting upon the abrupt manner in which year by year enteric fever increases in Manchester the medical officer of health has thought that perhaps the return of medical men from their holidays might account in some measure for this phenomenon. He thinks, however, from a careful study of the facts as presented in Manchester, that this view fails to explain matters. As a provisional hypothesis he suggests that a marked multiplication of the organisms of diarrhœa and enteric fever takes place in the soil about the same time,

the effect of such multiplication being first apparent, in so far as the human species is concerned, in an increase of diarrhœa, which is usually gradual, and a little later an increase of enteric fever, which is usually sudden. Tracing back the figures for Manchester since 1891 Dr. Niven finds that, broadly speaking, there has been preceding each rise of diarrhœa and enteric fever what he calls a "critical rainfall" which has been preceded and followed by a period of relatively dry weather sufficing to raise the level of the ground thermometer to the temperature which Dr. Ballard in connexion with diarrhœa regarded as an essential or, at any rate, an invariable accompaniment. The student of epidemiology will be well repaid by reading carefully this section of Dr. Niven's report. The part taken by shellfish in the spread of enteric fever has also received attention in Manchester during 1898, and we are told that the facts for the year in question produce "an impression that shellfish cannot be dismissed as a possible cause of disease, although, in the absence of a knowledge of the extent to which shellfish are used, they furnish nothing in the shape of proof." Instances are given in which "shellfish could have caused the disease," but in the absence of a definite outbreak such as occurred at Connecticut and in Essex it is obviously difficult to say more. Numerous instances of the infectivity of enteric fever are supplied in the report before us and we are told that, as was the case in 1897, direct infection has played a most conspicuous part, some 39 attacks having been, it seems, not improbably caused by *overlooked* cases. Considerable energy is expended in Manchester in an endeavour to control the spread of measles and the routine practice apparently obtains of closing an infants' department of a school when the number of cases exceeds 10 per cent. The basis of this position is the belief, in which we expect many of our readers will share, that "no circumstances of life outside the school offer anything like the opportunities for personal infection which aggregation in school does." With recent local legislation as regards the control of milk from tuberculous cows Dr. Niven is clearly much gratified, as, indeed, seeing the prominent part taken by his corporation in the measures, he may well be. Clearly, however, he regards this as but a drop in the ocean of control by which he hopes ultimately to reduce the death-toll from tuberculosis. Voluntary notification of phthisis has apparently now been arranged for and a scheme for dealing with this disease adopted by the council. Into the causes likely to be operative in making for the high death-rate of Manchester Dr. Niven goes very minutely, but after considering many of those which are generally believed to have an influence in this direction he concludes that to the defective privy-midden system of refuse and increment disposal, coupled with the bad condition of the passage and house drains, must be attributed the soil pollution which he regards as being so largely instrumental in fostering enteric fever, scarlet fever, and diarrhœa. Good work is being done in Manchester under the Housing of the Working Classes Acts, houses for 1070 persons and a model common lodging-house for 363 persons being in course of erection.

ASYLUM REPORTS.

Suffolk County Asylum (*Annual Report for 1898*).—The population of the asylum consisted of 620 patients and of these 294 were males and 326 were females. During the year 169 patients were admitted, 90 of these being males and 79 females; 28 of these, or 15 males and 13 females, had been patients before and were re-admitted during the year owing to relapses. The admissions for this year were nearly a score in excess of those for the previous year, a considerable proportion being senile or chronic from the outset. The dangers of overcrowding have been met by temporary boarding out of a certain number of patients until such time as further accommodation could be provided. Dr. James R. Whitwell, the medical superintendent, states in his report that "31·3 per cent. of the patients were admitted in a feeble or exhausted condition." It is interesting to notice that an out-patient department was opened at the institution early in the year 1898 for advising and treating cases of early or slight mental or nervous disorder and this appears to be of distinct value. Of the patients discharged during the year as recovered 34 were males and 29 females, or a total of 10·1 per cent. of the average number resident. The deaths during the year amounted to 64 and comprised 32 males and 32 females, or 10 3 per cent. of the average number resident. Of the deaths three were due to apoplexy, two to epilepsy, two to senile decay, four to bronchitis and pneumonia, and four to general paralysis. Phthisis and other forms of tuberculosis accounted for 14 deaths and chronic Bright's disease for the same number. During the year 10 male patients escaped and two of these were re-captured. The proportion of patients employed in some form of useful or industrial occupation amounted to 70 per cent. on the male and 80 per cent. on the female side. The whole drainage system has been thoroughly examined by an expert and important alterations in ventilation and sewerage are being carried out.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: A. L. Christie to the *Pembroke* for Chatham Dockyard; M. FitzGerald to Haulbowline Hospital; C. Pearson to the *Majestic*; A. T. Corrie to the *Wildfire* for Sheerness Dockyard and Naval Barracks; and E. H. Saunders to the *Lion*. Staff Surgeons: C. Bradley to the *Niobe*; R. H. Nicholson to the *Durham*; and H. W. G. Doyne to the *Centurion* for the *Yokohama*. Surgeons: J. H. Acheson to the *Colossus* and T. E. Honey to the *Caledonia*.

ROYAL ARMY MEDICAL CORPS.

Captain Thomas and Captain Prendergast have left Southampton in the *Gaika* for the seat of war. Major C. E. Faunce, Major H. A. Cummins, and Captain C. E. G. Stalkartt have joined at Aldershot to prepare for duty in South Africa. Lieutenant Ashe has embarked for service in South Africa. Lieutenant R. E. G. Phillips, attached to the 1st Life Guards, is ordered to Aldershot to prepare for duty in South Africa.

TRANSVAAL WAR NOTES.

We understand on good authority that the way in which the wounded at the battle on the Tugela were removed to hospital from the field of operations deserves the highest praise. In confirmation of this a telegram to the *Times* dated Cape Town, Dec. 20th, says: "Sir William Mac Cormac reports that 800 wounded have passed through Chieveley Hospital and that the field was cleared of wounded by 5 o'clock on the evening of the battle on the Tugela. He adds that the Volunteer Ambulance Corps did splendid work and that the field hospital completely and promptly met a great emergency."

Mr. Frank Parish, L.R.C.P. Edin., M.R.C.S. Eng., the Mayor, and Mrs. Frank Parish, the Mayoress, of Worthing, entertained at dinner on Christmas Day the wives and children of the sailors and soldiers called to the front. Mr. Parish has offered to house, and to provide medical and surgical assistance for, 50 sick and wounded.

The Portable Building Company of Manchester is sending out a small portable hospital for use at the seat of war as a gift to the Red Cross Society.

The following civilian surgeons are embarking in the transport *Orient*, leaving Southamptonto-day (Friday) for military hospital duty in South Africa: W. V. Eaves, A. C. Robinson, J. N. Gardiner, M. P. Cooke, C. R. Martin, E. L. Hunt, E. C. Osborn, H. H. C. Dent, J. F. R. Gairdner, T. Kay, A. Granville, A. Ricketts, E. N. K. Wells, F. R. Stewart, H. L. Porteous, and J. P. Brown.

DEATHS IN THE SERVICES.

Surgeon-General John Ogilvy, M.D. Aberd., L.R.C.S. Edin., Army Medical Service (retired), suddenly on Dec. 23rd, at his residence, Frimley Lodge, Frimley, Surrey. He joined the Army in 1853 by entering as an assistant surgeon in the 33rd Regiment, with which he served throughout the Crimean war, being present at the battles of the Alma, Inkerman, Balaclava, and at the siege of Sebastopol; he also served in the Indian Mutiny and from 1872 to 1877 was secretary to the Medical Department, East Indies, at Simla. He retired from the service in 1883. Surgeon-General Ogilvy came from an old Forfarshire stock and was 68 years old at the time of his death. He was the author of "Bermuda,

Past and Present." For his services at the assaults of the Redan he obtained the medal with three clasps and he also held the Turkish medal.

Surgeon-Colonel George William Jameson, late Bengal Medical Department, on Dec. 14th, at St. Catherine's, Westcombe Park-road, Blackheath, aged 64 years.

SURGEON-GENERAL JAMESON.

The German Emperor has confered upon Surgeon-General J. Jameson, C.B., Director-General of the Army Medical Service, as an exceptional and special act of favour, the medal instituted in memory of the late Emperor William. Surgeon-General Jameson was in charge of a division of the English ambulance in France during the Franco-German war of 1870–71.

The undermentioned officers have been appointed Honorary Physicians to the Queen:—Surgeon-Major-General A. F. Bradshaw, C.B., A.M.S., vice Surgeon-Major-General S. A. Lithgow, C.B., D.S.O., A.M.S., retired pay, deceased; Surgeon-General A. H. Fraser, A.M.S., vice Surgeon-General Sir C. A. Gordon, K.C.B., A.M.D., half-pay, deceased.

Correspondence.

"Audi alteram partem."

"EARLY v. LATE OPERATION IN CASES OF INFLAMED APPENDIX."

To the Editors of THE LANCET.

SIRS,—I have read with much interest in THE LANCET of Dec. 16th Mr. Mansell Moullin's paper on the above subject. I confess, however, to a feeling of disappointment, which I believe will be shared by many, that he has not enlightened us with some account of the cases that he has had under his own care. He tells us that "for some time past" he has "advocated operation at the earliest possible opportunity in all those cases which have not shown definite signs of improvement within 36 hours," but he unfortunately does not tell us what his results have been. He quotes McBurney's "report of 24 early operations, 23 of which recovered." Now if these 24 operations formed a *consecutive* series and embraced all the early operations performed by him for acute appendicitis within a given period they would be of the utmost value and would go far towards establishing Mr. Moullin's point. But McBurney himself is careful to explain[1] that he excludes from his statistics certain classes of more severe cases upon "a number" of which he has operated "without success." He explicitly says that "in some of these the operation was done at an early period as regards time." He excludes all cases in which "general septic peritonitis had *begun*" (the italics are mine), those in which "pus had flowed freely down into the pelvis," and those in which "complete septic paresis of the intestines had set in." Now the existence of these conditions, especially the first and last, is by no means easy to determine with certainty and the assumption of their existence affords a ready means of excluding fatal cases from statistical tables.

I have no wish to undervalue McBurney's 24 cases, upon which he is to be congratulated, but it does not seem to me to be quite fair to quote them by themselves, as Mr. Moullin does, without any reference to the unknown number of other early operations which proved fatal. The opponent of early operations for acute appendicitis might well retort not only that many of these 24 cases would have recovered without any operation or after an operation at a less dangerous period, but also that it is at least possible that some of the other unmentioned fatal cases would have recovered had they not been subjected to this early operation.

Mr. Moullin does not seem to me to distinguish sufficiently clearly between removal of the appendix *during* the attack and removal *after* the attack. More than once he speaks of "during or after" the attack as if it were a matter of indifference which period were selected for the operation. Now every surgeon of experience knows that the removal of the appendix in the quiescent interval after the attack is an operation which, if performed with ordinary care, has scarcely any mortality. Treves[2] has recorded 150 operations of this kind with only one death. In St. Bartholomew's Hospital during the four years 1895–96–97–98 there were 42 of these operations without a death. The statistics of other hospitals appear to show a similar very low mortality. My own small personal experience of 11 cases has shown no deaths and no complications of any kind except a slight attack of phlebitis in one case. But it has yet to be shown that the early operation during the acute attack is such a simple and safe proceeding. Even McBurney's figures do not show this to be the case. Perhaps the statistics of Mr. Moullin's own cases, if he will give them to us, will afford the necessary proof.

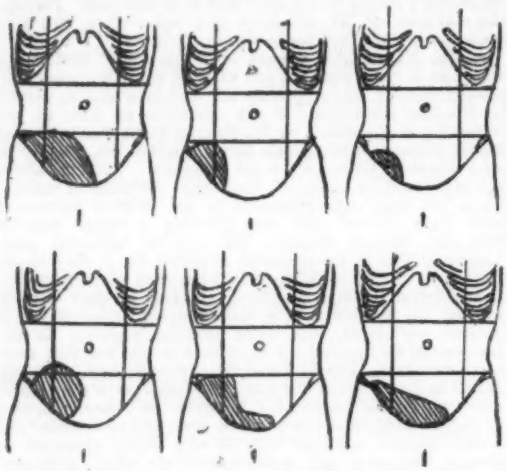
Again, Mr. Moullin speaks of "operation" during the attack as if there were but one kind of operation possible—namely, that of freely opening the abdomen without regard to limiting adhesions. If the operation be done at the beginning of the attack, as Mr. Moullin recommends, it is of course impossible to operate through adhesions, because in all probability there will be no adhesions. But what about the other and, to my mind, far better operation of waiting for a few days until adhesions to the anterior abdominal wall have formed and then making a small incision into the abscess through the area of adherent peritoneum? This is an operation attended by a very slight mortality. Of 41 such cases in four years at St. Bartholomew's Hospital only two died. It may be said that by waiting the patient runs a risk of dying or developing a general peritonitis, but when surgical registrar at St. Bartholomew's Hospital my experience taught me that such cases were rare. Provided that the patient be kept *absolutely at rest* in bed and not disturbed by purgatives or enemata or other injudicious treatment, it is, so far as I have seen, rare for diffuse peritonitis to supervene. Over and over again have I seen patients admitted very ill with acute appendicitis, general distension, and tenderness of the whole abdomen a quick pulse, and high temperature. Some of these patients have been submitted to the early and large operation, usually with disastrous results. Others, clinically precisely similar, have been treated on a more conservative plan, and after a period varying from four or five days to ten days or even more have undergone the slight and comparatively safe operation above mentioned. Of course there are certain very severe cases in which it is impossible to wait, but I venture to think that many surgeons at the present day over-estimate the frequency of such cases and are inclined to operate too soon upon cases which would have been saved by a later and less severe operation. Of 39 cases treated in six years 1893–98 at St. Bartholomew's Hospital by the operation of free incision into the general peritoneal cavity without regard to the area of adhesions no less than 32 died. Many of these, it is true, were cases that were in a hopelessly bad condition when first seen, but many, on the other hand, were not a bit worse than the majority of those that recovered after treatment by the milder plan.

Mr. Moullin quotes figures from Fowler to show that the mortality after operation increases directly with the number of days that have elapsed since the onset of the attack. This is no doubt true if by operation is meant the larger operation of freely opening the uninfected portion of the general peritoneal cavity. That this was the operation performed in the 127 cases reported by Fowler is clear from the account he gives of them. But the statement is not true if by operation we mean the later and simpler operation that I have mentioned. For the successful performance of this operation it is essential that there should be a delay of several days. Then only is the area of adhesions sufficiently large to enable the incision to be made without fear of infecting the surrounding non-adherent peritoneum. I am in the habit of waiting in most cases at least a week, and sometimes longer, before I make the nece sary incision. It is usually not difficult after careful palpation and percussion to say when the proper time has arrived. It is a matter of the greatest importance that the incision be made through the area of adhesions only. In the great majority of cases a small incision parallel with, and immediately above, the outer part of Poupart's ligament is the only one that can with safety be adopted. Incisions in the semilunar line or through McBurney's point will usually also open the non-adherent peritoneum and probably lead to diffusion of the septic contents of the abscess. The accompanying diagrams are from post-mortem examinations made by myself at St. Bartholomew's Hospital. The patients had died after operations involving the general peritoneal cavity irrespective of the area of adhesions. The shaded area in each case shows the area of pus or adhesions in contact with

[1] Annals of Surgery, 1891, vol. xiii., p. 248.
[2] Clifford Allbutt's System of Medicine, 1897, vol. iii., p. 936.

the anterior abdominal wall. It will be seen that in all six cases some portion of the shaded area is immediately above the middle and outer part of Poupart's ligament.

One point that struck me forcibly soon after I began systematically to make post-mortem examinations was that many cases that appeared during life to be cases of general peritonitis were found post mortem to be cases in which the



Diagrams of six cases of appendicitis showing the area of pus or adhesions in contact with the anterior abdominal wall.

suppurative process was limited to a comparatively small part of the abdomen. In most of these cases the larger operation seems to cause diffusion of the pus and rapid septic absorption.

Mr. Moullin reproduces and endorses a statement of an American surgeon that "one-half of all the patients who would have recovered by operation will die if we wait until the sixth day." This statement is one which Mr. Treves, I notice, characterises as "totally opposed to facts."[3]

In conclusion, I would venture to say that every case of acute appendicitis should be treated upon its own merits and not in accordance with hard-and-fast rules, that the early operation for acute appendicitis does not, in the hands of most surgeons, yield very satisfactory results unless performed upon the slighter cases only, and that a delay of a few days will in the great majority of cases allow of the performance of a smaller, safer, and on the whole more satisfactory operation.

I am, Sirs, yours faithfully,
JAMES BERRY, B.S., F.R.C.S.,
Surgeon to, and Lecturer on Surgery at, the Royal Free Hospital.
Dec. 19th, 1899.

"THE MEDICAL DEFENCE UNION AND THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY."

To the Editors of THE LANCET.

SIRS,—In his letter dated Dec. 18th and published in THE LANCET of Dec. 23rd, Dr. W. S. A. Griffith, the President of the Medical Defence Union, says the failure to effect amalgamation of these two societies "is due to the fact that no one has yet been able to devise a scheme which will satisfy the legitimate requirements of those who are responsible for safeguarding the interests of each society."

Three attempts have been made and have failed to bring about this amalgamation. The first two attempts were undertaken on the initiative of the Medical Defence Union. It would be interesting to know from Dr. Griffith what "legitimate requirements" made known by the Medical Defence Union were not satisfied during those two attempts. Perhaps he will kindly tell us what these unsatisfied "legitimate requirements" were. The third attempt at amalgamation was suggested by the council of the Medical Protection Society who, having in mind the failure of the first two attempts, proposed that every detail of the amalgamation should be left to an arbitrator skilled in such matters, and fully supplied by both societies with all necessary and special information. The council of the Medical Protection Society was and is convinced that what Dr. Griffith calls the "chances of arbitration" could exercise no detrimental effect upon the true interests of the amalgamated societies because those interests would be perfectly safeguarded by the governing body of the united societies. Interests involving, among other things, the safeguarding of some millions of pounds sterling are dealt with in this way every year in London.

The proposition that two strong and successful societies could not, when amalgamated, easily protect their own united interests is to my mind an oddity, with a suggestion of the humorous about it which in these sad times is very welcome. The Medical Protection Society has at the very least done its full share in helping on the amalgamation of these two societies. It has done this in deference to a wish to that effect expressed by many members of our profession who take an intelligent interest in medical defence and many of whom are members of the Medical Defence Union.

I am, Sirs, yours faithfully,
G. A. HERON,
Treasurer and Chairman of Council of the London and Counties Medical Protection Society.
Harley-street, W., Dec. 26th, 1899.

"SOME POINTS IN LIFE ASSURANCE EXAMINATIONS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 16th there is published a letter from Mr. F. T. Simson, dated Dec. 1st, suggesting two additional questions to be added to the usual list on forms for candidates for life assurance. They are: (1) What is the temperature of the candidate? and (2) Has the candidate suffered from any ear discharge, and, if so, has the trouble completely cleared up? Mr. Simson states that for some years he has been connected with life assurance offices and appears surprised at the omission of such important questions as the above from their medical report forms. It is in reference to question 2 as a novel suggestion that I must express surprise. Taking the medical report forms of a number of life assurance offices with which I am personally acquainted a specific question as to the ear, varying in such details as: "Have you ever had pain in or discharge from?" "Any affection of?" "Deafness or discharge from?" "Any otorrhœa?" is asked by the following offices: the London and Lancashire, English and Scottish Law Life, Pelican, Marine and General, Equitable of the United States, Yorkshire, Hand-in-Hand, Scottish Provident, Scottish Imperial, and Caledonian.

Indirectly the question is asked in the medical report form of the Scottish Equitable by the query, "Have you ever suffered from any complaint of the head?" As to existing discharge the question is asked indirectly in the report of the Law, Union, and Crown by the query, "Are you now free from disease or ailment?" In the form of the Scottish Amicable there is a question occurring after the enumeration of a detailed list of ailments and diseases, "Have you ever suffered from any other disease or ailment?"

I am, Sirs, yours faithfully,
Fenchurch-street, E.C. HERBERT CROSBY.

"DENTAL APPOINTMENTS AT GENERAL HOSPITALS."

To the Editors of THE LANCET.

SIRS,—I have just read your annotation in THE LANCET of Dec. 23rd advocating that dental surgeons appointed to general hospitals should be selected exclusively from those who hold a medical qualification in addition to the L.D.S., and I quite agree with your view that dental surgeons who have to teach medical students and treat cases on the borderland between dental and general surgery should by preference have a medical qualification; but I do not think that at the present time a medical qualification should be demanded from any candidate for a dental appointment in a general hospital whether a medical school be attached or not. My reason for venturing to dissent from your opinion is that I think more regard should be paid by the governors of a general hospital to the needs of the dental

[3] Ibid., p. 932.

patients than to the requirements of medical students in dental instruction. Let the general hospitals aim at providing efficient treatment for their dental patients, which they will not be able to do if they exclude the L.D.S. from staff appointments.

If I might venture to quote my own experience I should say that the best way to teach dental surgery to a medical student is to give him demonstrations within the fully equipped dental department of his medical school, where he may occasionally occupy the dental operating chair as a patient. The time may come when the name of every dental practitioner will be found in the Medical Register, though I feel that it is a prospect that is becoming more distant every year. Meanwhile, Licentiates in Dental Surgery of the Royal College of Surgeons of England should be eligible as applicants for medical staff appointments, though if two candidates were quite equal in other respects I should be prepared to vote for the one who had the medical qualification.

I am, Sirs, yours faithfully,
F. NEWLAND-PEDLEY, F.R.C.S. Eng., and L.D.S.
Devonshire-place, Portland-place, W., Dec. 23rd, 1899.

THE LATE DR. FRANCIS J. A. WARING.

To the Editors of THE LANCET.

SIRS,—I should like an opportunity of expressing my sorrow at the untimely death of Dr. Waring. Although my acquaintance with him has not been of long duration yet I feel that I have lost a true and trusty friend. His zeal and earnestness in the cause of hospital reform are well known amongst his Brighton friends, and the Hospital Reform Association had no member who was so ready to devote both time and money to the furtherance of its objects.

I am, Sirs, yours faithfully,
Windsor-place, Cardiff, Dec. 23rd, 1899. T. GARRETT HORDER.

PUBLIC HEALTH OF DUBLIN:

A MEASLES AND TYPHOID EPIDEMIC: CENTRAL FEVER DENS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

(Continued from page 1779.)

IT is manifestly wrong to allow the existence of slaughter-houses, especially ill-regulated private slaughter-houses, in the very centre of a city. But when such slaughter-houses stand side by side with a school which sometimes contains as many as 700 children belonging to the poorest classes the danger is considerably increased. Nor are the arrangements of this school such as to enable it to offer some resistance to unwholesome surroundings. The children are often underfed, they come from dirty overcrowded homes, and have to throng together in class-rooms where the provision of light, warmth, and ventilation is not supplied on scientific principles. The closets, it is true, for these children are in a yard and at some distance from the class-room. They are constructed on the trough system, and when I visited them they were free from any unpleasant odour. But it was easy to see at a glance that there is here no knowledge of school hygiene. The seats of the closets were clean but round about there was a good deal of rubbish accumulating in odd corners, indicating that the sweeping had been performed in a very perfunctory manner. As it is here that disease germs are more likely to be scattered about it is urgent that no dust or dirt likely to harbour and provide a culture ground for microbes should be allowed to accumulate. Care in cleaning out little corners should be enforced and in doing this the best of object-lessons would be given to the children. Again, in regard to light there was one large oblong school-room with windows on one of the long sides, but the children were placed with the light to the right. There was no reason why they should not have sat the other way round so as to have the light to the left, except ignorance of the principles of unilateral light. It is true that in Great Britain the same attention has not been bestowed on this question of unilateral light as in France, but why not utilise it properly where it exists? This incident served to show a lack of knowledge of the technique of school hygiene. The average daily attendance at this school during the past year was 508, which was considered very low, and the deficiency was attributed to the prevalence of measles.

Further down Townsend-street there is another school. This is a Protestant institution and is known as Elliot's Home for Children. Waifs and strays are taken in here, boarded and taught; it is a sort of rescue home for orphans and abandoned children. Consequently the pupils sleep on the premises. There is room for 120 boys and girls. The sanitary arrangements are good. The soil-pipes are of iron, ventilated on the roof, with intercepting and inspection chambers below. The yards are covered with asphalte. Closets for the children and for day use are situated outside; they are built on the trough system. There is no odour and all are kept scrupulously clean. Of course, the children themselves were also tidy and clean, but then they are all boarders and therefore can better be controlled. The dormitories seemed to me to be overcrowded and the diet provided was not very satisfactory. Only bread-and-butter and tea are given morning and evening; nor is the bread wholemeal. For the midday meal the children had soup twice a week. On one day eggs were given, so that there only remained four days for meat. If oatmeal porridge were substituted occasionally for white bread there would be a better chance of the children getting sufficient bone-forming food. But while there is room for some improvement in regard to diet and sleeping space there can be no doubt that the children are infinitely better off here than if dwelling in the homes of the poor. The cleanliness and the sanitary arrangements render this home quite an oasis in the midst of its dreadful surroundings. Nevertheless, these have not sufficed to ward off the epidemic. On July 13th last a little girl was taken ill with measles and sent to the Cork-street Fever Hospital. On the 21st of the same month another case occurred and then six more cases followed on the 24th and 25th. These children were all sent from the home to the hospital, but when they returned they said that they had been sleeping two in a bed at the hospital and for this and other reasons it was decided not to send any more children to the hospitals and a sort of infirmary was organised at the top of the house. Altogether there were 18 cases of measles among 50 girls. Only three or four boys were present at that time at the home, the rest being away for their summer holidays. A second epidemic commenced on Oct. 26th and a boy sickened. This boy had come into the home on May 29th. He had seen his mother in the interval, for she had called on him, but the mother was living at the time with a clergyman's family and there was no reason to fear any sort of infection. Two days later the boy was sent to the fever hospital where he died. An epidemic now broke out in the home and with the exception of the first case none of the patients were sent to the hospital. Two adult female assistants, four girls, and 15 boys all fell ill with measles. There were at the time 86 children and a staff of 12 teachers, attendants, and others residing in the home. Thus there have been this year in July and in October two severe epidemics of measles in the home, and this in spite of good sanitation and cleanliness.

Whatever may be said concerning the good sanitary conditions of the home it would be difficult to conceive more dangerous and obnoxious immediate surroundings. On one side there is a passage about six feet wide separating the home from the next houses. These houses are tenement houses of the worst description. Entering the first of them I found the hall passage soaking with urine and fæcal matter. A rickety, very narrow, twisting, and absolutely dark staircase led down past the basement to a small backyard. The difficulty of descending these stairs accounted in part for the soiling of the passage above. The yard was well paved and cemented; there was a gulley in the middle and the closet had a water-flush which, however, seemed to be but rarely used, for the pan was caked with soil. Still it was the inside of the house that was more particularly reeking with the foulest dirt. Then on the other side of the home there had been two cases and one death from measles in the nearest house. The front of the home looks on to the street, but to get to the back it is necessary to pass down the passage already mentioned. This passage soon widens out and forms a long court that flanks one side of, and goes round the back of, the home. It is a place that seems to be no man's land. The Dublin Corporation declare that it is not their business to look after it. At the entrance they have

put up a notice stating that it is "not in charge of the corporation." Yet on the wall facing this there is another notice saying that "the corporation will prosecute anyone depositing rubbish." The neighbours show their appreciation of these contradictions by piling up household refuse at the foot of the notice threatening prosecution. Beyond but feeble traces of pavement remain, so that holes form in the ground where dirty water stagnates. There are also some stables here and therefore accumulations of manure. Practically there is no drainage; all stagnates, ferments, and gives off foul odours. As there is no exit at the other end of this court or passage there is little or no traffic, so people go there to defecate in quietude, and at night it is also frequented by the lowest class of prostitutes. Old bedding is sometimes thrown out there. One neighbour had several cartloads of foul rubbish taken away at his own expense, but soon fresh filth accumulated and it is impossible to keep the place clean while it is accessible to all who choose to enter. Hence there is a veritable Slough of Despond surrounding two sides of the home which supplies abundant unwholesome effluvia for the children to breathe. It is therefore not so surprising that there should be epidemic diseases in this establishment; and apart from the measles that has prevailed this year there are now and again cases of scarlet fever and three years ago 34 of the children suffered from German measles.

Such are some of the conditions which are allowed to exist in Townsend-street: slaughter-houses that contaminate the air and the subsoil, low-class and filthy tenement houses, passages and courts where refuse of every description accumulates and decomposes,—all this exists in a thoroughfare that is as near to the Bank of Ireland and as much in the centre of the city of Dublin as Lombard-street or Gracechurch-street is in the centre of the city of London.

(To be continued.)

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Conflicting Medical Evidence.

THAT "doctors disagree" is a phrase of frequent occurrence in outside expression, but that it should find occasion to be fraught with consequences so important to justice was well emphasised in a case tried at the Birmingham Assizes on Dec. 13th before Mr. Justice Lawrance. A man was charged with the wilful murder of a woman with whom he cohabited. According to a statement made by the man himself and repeated on subsequent occasions he had a few words with the woman and she dropped down dead. He made no attempt at concealment and went himself for a medical man. It was found on examination that there was a clean cut through the lobe of the right ear. The assistant to a surgeon who made this discovery reported that the wound had passed through the ear into the neck, puncturing the brain, and that it must have been caused by some sharp instrument and not by the corner of the oven door against which she was supposed to fall. He stated at the assizes that the wound was one inch in length, but on cross-examination that it was half an inch, and in other details broke down remarkably upon questions of facts. The police surgeon, who examined the deceased after the inquest, stated in evidence that there was no puncture of the skull or brain at all, and that the wound in question being only half an inch long and superficial might easily have been made by the fall; it never touched the skull, only going just through the skin behind the ear. The judge intervened at this stage and the foreman of the jury said that it was their unanimous opinion that there was no case, upon which Mr. Justice Lawrance remarked: "Speaking generally, one has an uncomfortable feeling when doctors disagree. I don't want to say more than that. The evidence of one of them has commended itself to you and to everyone else who has heard the case." The prisoner was then discharged.

St. John Ambulance Association.

The annual meeting of the Birmingham Centre was held on Dec. 18th. Lord Leigh, the President, was unavoidably absent. The committee in their nineteenth annual report stated that the expenditure for the year had exceeded the income by £2 6*s.* 7*d.*, which was accounted for by the fact that three additional wheeled litters had been charged to revenue. The number of classes had been the same as the previous year—namely, 20. The income from voluntary subscriptions was less. The details relating to the occasion when a number of the members of the Birmingham corps severed their connexion with the parent body and formed the Birmingham and District Ambulance Brigade were set forth at length. An amendment that the report be referred back to the committee for further consideration was defeated by the casting vote of the chairman. The rules which were regarded as unpractical were stated to be the difficulty of attending 12 drills a year, to attend an annual inspection, and to undergo an annual examination in ambulance work. The police, firemen, and railwaymen could not fall in with these regulations, while in regard to the examinations the surgeon already attended every three months and saw the men go through their drill. To these fundamental principles not one of the 15 divisions was able to accede and so they resigned, forming another body which was doing good work in the city. Colonel Bowdler (Commissioner) explained that the difficulties might be met by reasonable common sense with regard to details and denied any desire to turn the association into a military organisation. The reason why Birmingham men were not accepted as volunteers for South Africa was because the War Office declined to take any but men who were members of the St. John Ambulance Association. It is hardly possible that the wide breach occasioned by so large a recession will be bridged over, however much the circumstances cause regret.

Women Students.

An adjourned meeting of the conjoint staffs of the General and Queen's Hospitals was held on Dec. 19th to consider further the question of admitting women to the clinical instruction and practice of the hospitals. As already noted, the constitutions of the hospitals differ, the Queen's being founded essentially as a clinical institution in connexion with Queen's College. Now that the latter has been merged into Mason University College the question of the interpretation of the Charter as it originally stood is open to be argued. Difference of opinion is expressed and the opinion of an eminent counsel has been taken, with the result that some modification must be made. The staffs of the hospitals have referred the matter to the respective committees and while influenced by the main consideration as to the effect upon the medical school by the admission of women students are further divided in opinion as to the desirability at the present time of advocating their claims. Until the question of the exact relation of the Queen's Hospital to the Mason University College in this particular is settled united action of the staffs cannot well be taken with any definite purpose.

Habitual Inebriates Act.

On Dec. 12th the Birmingham justices for the first time exercised their powers under the above Act and sent a married woman for a period of three years' detention in the Royal Victoria Reformatory, Brentry, near Bristol. Many previous convictions for drunkenness—five occurring this year—were proved, the last time the prisoner was found in such a condition as to make it necessary to carry her on the ambulance to the police station. Altogether she seems to have been a good subject for the experimental reform which the home affords and also to serve as an example of which it is hoped due note will be taken by those similarly affected; if, indeed, any precept or example can touch this class of victims steeped in inebriety.

Dec. 26th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Strychnine Poisoning at Crumpsall Workhouse.

THE Manchester city coroner, Mr. Smelt, resumed an inquiry on Dec. 20th as to the cause of death on Dec. 14th of two of the inmates of the Crumpsall Workhouse. It appeared from the evidence that one man, Smith, was taking a mixture containing etherial tincture of lobelia, spirit of nitrous ether, ammonia, and senega. Another inmate, Shoreham, had a mixture each dose of which should have contained $\frac{1}{15}$th of a grain of strychnine. From the "accidental" use of the strychnine stock bottle to replenish the nitrous ether bottle not only were two patients,

Smith and Wharton—the latter only admitted that day—fatally poisoned, but the lives of others were endangered, though not lost, owing to the promptitude of Dr. H. C. Woodhouse, the assistant resident medical officer, in stopping at once the giving of any more medicine to any of the patients, as eight other patients showed symptoms of strychnine poisoning. The only ingredient in the prescriptions common to all these patients was spirit of nitrous ether, for which the solution of strychnine had been substituted. The victim, Smith, it seems, had two doses of the fatal draught. The second man, Wharton, was suffering from a disease similar to that of Shoreham and had the same medicine prescribed, which would contain a little more strychnine than Smith's, as it contained the medicinal dose in addition to that added by using the strychnine solution for the spirit of nitrous ether, and one dose would contain more than half a grain. A necropsy was made in each case, Dr. Woodhouse said that Wharton's case "was not typical of strychnine poisoning, but the symptoms were such as might be caused by strychnine, and in a man of his weak condition would be sufficient to cause death." Without going into detail as to the arrangements for dispensing and for replenishing the various bottles in the dispensary from the large three-gallon stock bottles, the impression left from the evidence is that there was a certain amount of laxness and a want of systematic precaution such as would have made this deplorable occurrence impossible. There are three qualified dispensers, a senior and two assistants, between whom, as the coroner said, the responsibility lay. "It was certainly a dangerous practice to have bottles containing poison first filled by one person and then by another." It has not been the custom at Crumpsall to initial the labels when medicine is sent up to the patients, and in this case there was some doubt as to the actual dispenser of the medicine and considerable doubt as to the one who filled the bottle of spirit of nitrous ether with the solution of strychnine from the stock bottle. The jury returned a verdict, "That the deceased men met their deaths through misadventure by strychnine poisoning, and that in consequence of the lax system which obtained in the dispensary the jury were unable to fix the blame upon any individual." They also made the very sensible suggestions "that all poisons should be kept in bottles of different shape from ordinary medicine bottles and that the dispenser should initial the bottles when he filled them up, and also initial the bottles sent to the patients." The coroner agreed with the jury that these precautions should be observed. He did not blame the guardians who had done the best they could to get efficient dispensers. "The blame was on the dispensers." No such accident, it is believed, has ever happened before at the Crumpsall Workhouse, but an imperfect system of dispensing has been practised for years without any known tragedy occurring, and this continued impunity has led to an automatic, unthinking routine, so that, as one of the dispensers stated in his evidence, "some of the bottles he knew perfectly well without looking at them." There is no doubt that the danger of poisoning at Crumpsall Workhouse will be much less in the future than it has been in the past.

The Evening Papers and the Chorlton Workhouse.

It was stated at a meeting of the Chorlton Board of Guardians held on Dec. 22nd that the Manchester evening papers had agreed to do what must be looked upon as a kindly action, to supply gratuitously 75 copies of their publications daily. A resolution of thanks was proposed and cordially adopted. The papers will help in some degree to relieve what must often be felt as weary hours.

Dec. 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University Court.

AT a meeting of the Edinburgh University Court held on Dec. 18th the Court approved of the recommendation of the Senatus that Dr. J. W. Ballantyne should be appointed, for one year, University Lecturer on Ante-Natal Pathology and Teratology, and that he should be authorised to deliver in the University a series of four lectures on this subject, the course to be given on consecutive Fridays, commencing in February next, and to be open without fee to all members of the University and practitioners of medicine.

Presentation of Portrait to Sir John Sibbald.

On Dec. 23rd, in the name of a large number of his friends, Sir John Sibbald was presented with his portrait. The presentation took place in the Royal College of Physicians, Edinburgh, in the presence of a considerable number of ladies and gentlemen. The chairman of the General Board of Commissioners in Lunacy presided, and the presentation of the portrait, which had been painted by Sir George Reid, was made by Dr. D. Yellowlees. Dr. T. S. Clouston, on behalf of the subscribers, presented Lady Sibbald with a set of silver flower bowls. Sir John Sibbald suitably replied and a vote of thanks to the chairman terminated the proceedings.

The Scottish Universities Preliminary Examination Statistics.

The Joint Board of Examiners of the Scottish Universities have just published statistics relative to the preliminary examination in science, arts, and medicine. With regard to the medical preliminary examination the statistics are: 'At St. Andrews 12 students entered; of these one failed, five passed, one passed in three subjects, one in two subjects, and four in one subject. At Glasgow 82 entered; 18 failed, 38 passed, five passed in three subjects, seven in two subjects, and 14 in one subject. At Aberdeen 42 entered; 12 failed, nine passed, three passed in three subjects, seven in two subjects, and 11 in one subject. At Edinburgh 125 entered; 20 failed, 46 passed, seven passed in three subjects, 18 in two subjects, and 34 in one subject.

The Royal Physical Society of Edinburgh.

At the second meeting of the Royal Physical Society on Dec. 20th, Dr. D. Hepburn exhibited an improved form of craniometer and a new osteometric board.

Pharmaceutical Society of Great Britain.

At a meeting of the Pharmaceutical Society held on Dec. 20th, Mr. Thomas Dunlop, pharmaceutical chemist, Glasgow, read a paper on An Incompatible Strychnine Mixture. The mixture referred to is that of the new pharmacopœial solution of strychnine with arseniate of sodium, when the strychnine separates in a crystalline form.

University of Edinburgh: Prize for Research in Tropical Diseases.

A prize of the value of 25 guineas has been presented to the University of Edinburgh for research in tropical diseases by a number of medical practitioners in the Straits Settlement. The Faculty of Medicine has determined that the prize shall be open for competition to students of medicine or graduates of medicine of not more than two years' standing; that competing essays shall be given in on or before April 30th, 1900; and that any essay containing original, scientific, or literary research on tropical disease shall be eligible for competition. As subjects of research the following are suggested: (*a*) investigation on the conditions producing attenuation and exaltation in the activity of plague virus and the relation of such changes to the symptoms of plague in man; and (*b*) the bearing of meteorological conditions on the incidence of tropical disease.

Dec. 27th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Public Examinations for Hospital Appointments.

NOTHING further has as yet come to light concerning the authors of the outrage by which the papers of certain candidates in this examination were destroyed. The Minister of the Interior has, however, decided upon that course which I suggested as being the most likely one to be taken[1]—namely, to hold another examination for the candidates whose papers were destroyed, a proportional number of cases being reserved for them. This decision has mainly been arrived at on account of those candidates who have to put in their military service this year and who underwent their examinations some two months ago. If an examination were to be held over again for all the candidates those unfortunate students who are at present in barracks and who have not

[1] THE LANCET, Dec. 16th, 1899, p. 1700.

opened a book since their examination would naturally be placed at a most unfair disadvantage.

Parish Mortuaries.

At a recent meeting of the Paris Municipal Council M. Fortin proposed the building of some parish mortuaries (mortuaires d'Arrondissement). At present there are mortuaries attached to the cemeteries, but, as M. Fortin pointed out, they are but little used owing to the objection to them which arises from many corpses being placed in the same room. The parish mortuaries would have the advantage of only receiving one dead body at a time and, being easy of access, would provide for the removal of a body directly after death, so that disinfecting operations could commence at once, which would be of great service in small tenements. Owing to the expense of this innovation the honourable member of the Municipal Council suggested that only three mortuaries should be built at present.

Dec. 26th.

RUSSIA.

(FROM A CORRESPONDENT.)

The Treatment of Disease by Light Rays.

IT is only within recent years that the value of light as a therapeutic agent has been practically recognised and the method of employing various kinds of light rays in the treatment of disease is still in its infancy. Sunlight rays in their entirety, or split up by prisms, or deprived of certain constituent rays by means of coloured glasses, the electric light rays of different kinds and of different modes of production, and finally the x or Roentgen rays, have all been tried and have all been found to possess greater or less influence upon morbid processes in the human frame. A number of Russian physicians and surgeons have recently recorded the results which they have obtained in their own practice or observed in foreign schools of medicine following upon resort to this mode of treatment, and some of these communications are of great interest. Professor Petersen, of St. Petersburg, has described, in a paper read before the Society of Russian Physicians, some strikingly favourable results in the treatment of lupus by chemical light rays. The method was based upon that practised by Professor Finsen of Copenhagen, whose work in the Lys Institute (or "Light Institute") in that city, has been known to the profession for some years past—more particularly in connection with the treatment of small-pox by red light and the treatment of lupus by various forms of natural and artificial light. Dr. Petersen's own cases, submitted to the treatment in St. Petersburg, have been only two in number up to the present. Both were females, and both had suffered from lupus for long periods, with almost no improvement from the medical and other treatment hitherto employed. The treatment by chemical light rays only began in October, but already, within less than a month, the improvement was very striking, and there was every hope that a cure would follow. Photographs of three cases before and after treatment accompany Dr. Petersen's paper, and these show examples of complete cure in patients who had suffered from lupus in a severe form for six and 15 years respectively. (The photographs are reproduced in the *Vratch*, No. 47.)

Another communication upon the same subject was recently read by Professor Velliaminof, the president of the Medico-Chirurgical Society in St. Petersburg, whose experience was, however, confined to observations made upon Professor Finsen's patients in Copenhagen, and who had not employed the treatment in his own practice. He spoke enthusiastically of the results obtained in the Danish capital. A third paper was read a short while since by Dr. Von Stein at a meeting of the Society of Russian Physicians describing the effect of electric light in the treatment, not of lupus, but of a traumatic injury to a limb. The patient, a young man, had injured his knee and a troublesome swelling remained, which refused to yield to treatment by compresses, massage, ichthyol, or other remedies. Resort was then had to the electric light—not (as in the case of lupus) deprived of any of its heat and light rays, but in its entirety. It was applied twice daily for 10 minutes at a time and the results were very rapid and striking. In three days the patient was practically cured; the swelling had subsided and all pain had disappeared and the patient was well enough to leave the hospital.

The Russian Ambulance for the Boers.

The Russian Red Cross Society has sent—as all the world by this time knows—an ambulance party of surgeons, nurses, and feldschers to the seat of war to aid in nursing the sick and wounded Boers. The offer of a similar party which was made to our own Government on Oct. 18th (30th) last was politely declined for obvious and sufficient reasons. The Boer Government, however, accepted the offer when made to them. Their answer was received in St. Petersburg on Nov. 7th (19th), and on the 28th of that month (Dec. 10th) a party of six surgeons, two administrative officials, nine sisters of mercy, four feldschers, and 12 sanitarians left St. Petersburg amid scenes, it is said, of the greatest enthusiasm. They travelled by train to Odessa, thence by Russian steamer to Port Said, and from there will proceed by a French boat to Lorenzo Marques. The expedition is provided with a complete field hospital, suitable for treating 25 patients. The whole cost of the undertaking will be covered by a grant of 100,000 roubles, or rather more than £10,000. Provided that the expedition is directed solely towards humanitarian ends (and there is no reason at present to suppose that it is not) no Englishman will do other than wish it success.

A Health Resort in Central Asia.

One finds a difficulty in associating Central Asia with the idea of a health resort. The names of Bokhara, Samarkand, and Tashkend call to the mind pictures of a country the past history of which was one of nameless horrors and the recent history of which is one of reluctant submission, after a bloody war, to the overwhelming might of Russia, which only succeeds in keeping peace by free use of the iron hand barely concealed under the velvet glove of civilised rule. The climate one is apt to think of as one of burning heat in summer alternating with Arctic cold in winter. All these preconceived opinions are probably equally wrong. Central Asia is settled and as safe under civilised western rule as India; and as regards climate, though the plains suffer from extremes there are said to be hill stations admirably suited for health resorts. Such a place is Rokubé, 3500 feet above sea level, in the hills not far from Samarkand, where (according to a paper read by Dr. Orlovski at a meeting of the Russian National Health Society) the mortality is very low and chest diseases are almost unknown. Other places in the neighbourhood are equally favoured. The winter is mild and spring begins in March. The sky is constantly clear and the air is of great purity. The climatic conditions are compared with those of Greece or Italy but are more continental in character. Next year a military sanatorium is to be established in this spot.

The Outbreak of Cholera on the Persian Gulf.

The Russian Medical Department continues to publish news of cholera prevalence in Bassora, on the Gulf of Persia. The Russian consul in Bagdad reported that between Oct. 25th and Nov. 17th (Nov. 6th and 29th) two cases of the disease and two deaths from it occurred in Bassora; and as many as eight cases, with three deaths, had been detected in Hai.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

History and Literature of Appendicitis.

DR. GEORGE M. EDEBOHLS of New York City contributes to the *Medical Record* an interesting article on the above subject. Although appendicitis is a disease concerning which, up to a comparatively recent date, but little has been definitely known its literature embraces more than 2500 articles, dissertations, and books. It therefore speaks well for Dr. Edebohls's perseverance and energy that, in the short space of 10 months and in the intervals snatched from the time taken up by a large practice, he should have read and passed in review this mass of literature. He tells us that records of appendicitis, though then known under the various names of iliac phlegmon, typhlitis, paratyphlitis, and perityphlitis, go back to 1642. As to the nomenclature of the disease Dr. Edebohls rightly thinks that although the present term is a barbarism it has been now too long established by custom to be displaced. The first recognition of appendicitis as a distinct disease was made by Mestinier in 1759. Yet as late as 1836 Albers, writing at length on

typhlitis and perityphlitis, does not even mention the appendix—showing that the knowledge of the disease was but scanty at that date. Appendicitis began to be diagnosed in 1847. The Frenchmen, Adenot and Gouilliond, first studied its bacteriology in 1891, but McBurney effected more than any previous investigators in diagnosing acute appendicitis by discovering and establishing the value in 1889 of "McBurney's point," while Edebohls in 1894 added the coping stone to diagnosis of the disease by the introduction and elaboration of palpation of the vermiform appendix. With regard to the comparative frequency of appendicitis in the sexes Dr. Edebohls says that the popular belief that men are more subject to the disease is not upheld by experience. Einhorn, in 18,000 successive necropsies, found perforating appendicitis in 0·55 per cent. of males and 0·57 per cent. of females, while Robinson in 128 consecutive necropsies found evidences of past peritonitis on and about the appendix in 66 per cent. of female and 56 per cent. of male bodies; and Dr. Edebohls finds clinically that 4 per cent. of all women have appendicitis. Kelynack says that the existence of the appendix does not appear to have been recognised previously to the sixteenth century when it was described by Carpi, Estienne, and Vidus Vidius. The female appendix averages half an inch longer than the male. By a number of New York physicians "*la grippe*" is considered to be a frequent cause of appendicitis. Dr. Edebohls's remarks as to foreign bodies in the appendix are peculiarly interesting; he says: "In former years foreign bodies in the appendix were considered under the head of etiology of the appendix. In the light of modern views the permanent lodgment of foreign bodies in the appendix is probably more frequently the result than the cause of appendicitis." Among the curious bodies found in the appendix have been most frequently coproliths, and next to these pins; but grape seeds, melon seeds, a grain of oat, cherry stones, prune stones, peanuts, a bristle, a glazier's point of zinc, a globule of solder, a gelatin capsule, a piece of bone, a piece of screw nail, a rifle cartridge, a fin of a fish, and a knot of a heavy silk ligature from a tubo-ovarian pedicle have also gained a lodgment in the appendix. Only one genuine case of left-sided appendix is said to have occurred—that recorded by Biegi in a soldier who died from appendicitis and was found on post-mortem examination to have a complete transposition of all the viscera. Mestivier has the credit of first operating for appendicitis in 1759, but the operation was not primarily undertaken with that object but for the purpose of draining an abscess in the right inguinal region; and the first recorded operation upon the appendix itself was planned by Dr. Mahomed and executed on August 24th, 1883, by Symonds. Kroenlein on Feb. 14th, 1884, performed the first removal of the appendix for acute appendicitis. Dr. Edebohls, however, states that all these early operations were fatal and that the first successful removal of the appendix was performed by Hall on May 8th, 1886, and other surgeons within the next two or three years operated successfully for acute appendicitis. Thereafter removal of the appendix in acute appendicitis rapidly became a recognised and oft undertaken procedure. Treves on June 29th, 1888, performed the first appendicectomy for relapsing appendicitis. With the exception of Barton and a few others who claim that better results are obtained by leaving the appendix in operations for acute appendicitis the large majority of surgeons of note advocate removal of the appendix in acute appendicitis as the routine procedure always to be attempted, save under the most exceptional circumstances. These are some of the most salient features mentioned in Dr. Edebohls's lengthy article which, however, contains much further and more diffuse information on the surgery of the appendix. It may be said that Dr. Edebohls's contribution is the most instructive condensed description on the subject which has yet been published.

Opinions as to the Parasitic Origin of Cancer in New York City.

Since Roswell Park published statistics showing that cancer is very greatly on the increase in the United States public interest in the question has been considerably aroused. Each new theory as to the origin of the disease is not only discussed in the medical journals but is made the subject of interviews with physicians in the lay journals. This is of course a feature of journalism almost wholly peculiar to America, although seeing that the newest British papers are modelled to a large extent on the lines of American journalism, the day may not be far distant when interviews on technical matters may be as frequent in British newspapers as they are on this side of the Atlantic. The parasitic origin of cancer is a fascinating one and much may be advanced in its support, but in New York this theory, judging from the interviews published in the *New York Herald* of a recent date, does not as yet appear to commend itself to New York prominent medical men as worthy of credence. The *raison d'être* of the latest interviews on cancer in the *New York Herald* is the theory of the origin of the disease promulgated by Dr. Friessinger of Oyonnax, who goes further than any of his predecessors in asserting the probability of the parasitic origin. A large majority of New York surgeons, microscopists, and pathologists who have been interviewed on the question gave as their opinion that until much more convincing proof as to the parasitic origin of cancer was forthcoming it would be idle to regard it as anything more than a plausible theory, and that the only successful mode of treating the malady was by the use of the surgeon's knife. Dr. Shrady said, "No microbe has yet been discovered for cancer in spite of what Dr. Bra believes. His alleged discovery has not been accepted by the medical profession generally either here or abroad. The principal reason for this is that cancer is an active animal cell-growth entirely different from that produced by any vegetable parasite whatever. The ordinary disease-producing microbe, of which that of diphtheria is a type, is one that kills by the secretion of an actual poison, while cancer is malignantly destructive by the invasion of neighbouring healthy organs." Dr. Robert Weir said, "We are closely watching experiments, but we cannot accept any claim until it has been proved by many pathologists who command the respect of the profession. The experiments so far have not altered the present method of treating cancerous diseases." Dr. Charles McBurney said, "A vast amount of work is being done in the direction of trying to learn whether the origin of cancer is a micro-organism. This theory has been advanced for many years, but more is being accomplished now towards clearing the matter up than at any previous time. ..... The theories and experiments of Bra, Plimmer, and others have by no means been abandoned. These men may be on the right track, and it is the only line on which the present investigations are being pursued." Dr. William Palk, Dr. James Ewing, Dr. Henry P. Loomis, Dr. Austin Flint, Dr. Charles Dowd, Dr. William T. Bull, and others delivered views on the matter more or less identical with the foregoing. The position taken by the medical men of New York would appear to be a wise one. All honour is due to the investigators who since Sanfelice first propounded the theory of a parasitic origin of cancer have laboriously and patiently trod in the same path. Undoubtedly the problem will be eventually solved, but until that event comes to pass the treatment indicated is the old radical one of excising as far as possible the malignant growths. M. Curtis of Lille summed up the whole question sensibly when he said "he considers that epithelial cancer of man is neither inoculable nor cultivable by any means hitherto employed, and that all observations tending to show the contrary which have been so far published are faulty owing to errors of technique."

Dec. 11th.

Obituary.

JOHN FREDERICK HODGES, M.D. R.U.I., J.P.

IT is with sincere regret that we announce the death of Dr. Hodges, of Belfast, which took place at his residence in that city on Dec. 13th at the advanced age of 84 years. Dr. Hodges, who belonged to an old County Down family, was born in Downpatrick in the end of 1815, his father being a solicitor. Receiving his early education in his native town, he afterwards made up his mind to join the medical profession and studied in Dublin and Glasgow. He became a Licentiate of the Apothecaries' Hall of Dublin in 1838 and a Licentiate of the Faculty of Physicians and Surgeons of Glasgow in 1837. During his residence in Glasgow he became acquainted with Professor Graham—afterwards Master of the Mint—who, recognising his abilities, advised him to become a chemist. However, he returned fully qualified as a medical man to his native

county and began practice in Newcastle (now the well-known golf resort), but subsequently removed to Downpatrick, where he helped primarily to found the Mechanics' Institute, one of the first ever established in Ireland. He took a deep interest in agriculture as a science, and in order to obtain a better knowledge of the subject he went to Germany and studied under Liebig, who was then the great European chemist and who was really the father of modern agricultural chemistry. A deep and lasting friendship was the result. Dr. Hodges engaged in original research and graduated M.D. of the University of Giessen. Coming home again, he delivered a lecture near Dunpatrick on "What Science can do for the Irish Farmer," which aroused so much interest in the North of Ireland that, largely as an outcome, the Chemico-Agricultural Society of Ulster was founded in 1845. Dr. Hodges became chemist to this body. In 1844 he went to Belfast to reside and shortly afterwards he was appointed Professor of Chemistry in the old Belfast Academical Institution. In 1849, when the Queen's College was founded in Belfast, Dr. Hodges was appointed Professor of Agriculture and Lecturer on Medical Jurisprudence, and he held both positions at the time of his death, though for years back he only lectured on the latter subject. In the year 1866 the Queen's University of Ireland in recognition of his original work conferred on him the honorary degree of M.D. His researches both as a chemist and as an agriculturist were known not only in this country but on the continent, and he was the recipient of many honours from foreign societies. He was an honorary member of the Royal Academy of Agriculture of Sweden, and of Turin, and of the Imperial College Gorygoretzt of Russia; and he wrote many treatises on chemistry and agriculture, as "First Steps in Chemistry," "The Structure and Physiology of the Animals of the Farm," "Lessons in Chemistry for Farmers and Teachers," &c. He contributed numerous reports to the British Association, and in 1856, when that body visited Belfast, he was one of the Vice-Presidents. He was the last surviving founder of the Royal College of Chemistry of London, and at the request of the council of that society he proceeded to Germany to offer the chair of chemistry to Professor Will, the assistant of Baron von Liebig, and when he declined it was offered to, and accepted by, Hoffman, afterwards the well-known Professor of Berlin. Dr. Hodges held many public appointments. For years he was Government analyst and for a period of 40 years he gave evidence in many criminal trials in Ulster, and he possessed a wonderful collection of relics connected with such cases. As an expert witness he was cool, collected, and decided, and he was specially able in poisoning cases, where his chemical knowledge was so valuable. He had been public analyst for Belfast since 1872 and also for five Ulster counties. He was a member of the Institute of Chemistry, of the Society of Public Analysts, and a corresponding member of the Natural History Society, Dublin. He was a Justice of the Peace for the county of Antrim. By the death of Dr. Hodges Queen's College loses the last of the original professors who were appointed in 1849; his ability, scholarship, and expert knowledge rendered him one of the ablest of that distinguished band of men who at its inception took charge of the educational affairs of that institution. A man of wide and varied reading, of a scientific bent of mind, and one who had come across in his long career an extraordinary number of men, Dr. Hodges was a most interesting companion. With a commanding presence, a fine physique, and with the most courteous, old-fashioned manners, Dr. Hodges was a prominent figure in the public life of Belfast. In his domestic and private relations he was extremely kind and affectionate. He bore his great years (84) well, and although his health began to fail in the summer of this year he discharged many of his duties up to within a few weeks of his death which was due to gastric catarrh secondary to cardiac disease. He leaves several children; his wife died a few years ago. By Dr. Hodges's death one of the most interesting links connecting old and new Belfast has been broken. Those who enjoyed the pleasure of his intimate friendship will always cherish the most pleasant memories of him.

RICHARD HENRY MEADE, F.R.C.S. ENG., J.P.

A NOTEWORTHY, if unobtrusive, career closed on the evening of Dec. 23rd, when Richard Henry Meade, F.R.C.S., J.P., of Bradford, passed away at the ripe age of 85 years. Some four years previously, Mr. Meade, in consequence of age with increasing deafness and shaken in health by an attack of influenza, from the effects of which he never fully recovered, retired finally from practice. His mental powers, however, remained vigorous, whilst his interest in passing events, his friends, and his lifelong favourite studies continued unabated to the last.

We are indebted to a personal friend of the late Mr. Meade for the following sympathetic character sketch. "A good sound surgeon and practitioner of the old school, of great experience and considerable acumen, under all circumstances considerate and courteous—this would probably express the opinion entertained of our departed friend by the profession in Bradford, and it would be a just verdict. Mr. Meade adorned his profession by his high sense of professional honour, which he ever himself carried into practice, his dislike and discountenance of everything mean or unworthy, his large-hearted tolerance, his modesty and unaffected kindness to all, and, finally, by his handsome presence and native dignity. He was superior to any petty professional jealousy. And what he was professionally and publicly, that also he was, as could not fail to be evident to those privileged to know him more intimately in the home and domestic circle.

"He had all his life been an enthusiastic naturalist and was a recognised authority on entomology, having made many valuable contributions to that science. He was fond of recalling with quiet satisfaction an incident that occurred at a meeting of the British Association held in Leeds many years ago under the presidency of the late Professor Owen (as he then was), when the paper which he there read—upon the Nature and Habits of Certain Spiders—was the only one ordered, upon the motion of the President, to be printed *in extenso* in the Transactions. So recently, indeed, as the present year he contributed to the *Entomologists' Monthly Magazine* a Descriptive List of the British Cordyluridæ of great completeness, which should be of permanent value to students. In such studies, with his books and specimens, and in painting in water-colours, he found congenial occupation and distraction in his declining years. By a friend whom he invited to spend the evening with him last spring upon the occasion of his eighty-fifth birthday, Mr. Meade's bright conversation and reminiscences, although he was then suffering considerably from weakness, are vividly recalled—the student days at St. Bartholomew's in the far-away past; his distinguished teachers, Sir W. Lawrence, H. Earle and, more particularly, Dr. P. M. Latham; his revered friend and fellow student, Sir James Paget; his frequent successes in the class examinations, 'but never first when Paget was there'; his lectureship on Botany at the Middlesex Hospital; some professional experiences in pre-chloroform days; his various hobbies, as he termed them (the ancient air-gun produced and put together once more), and his taxidermist exploits—all called back vividly once again to animate transiently the venerable features.'

Mr. Meade was left a widower several years ago, but constant and most devoted care for him in his old age on the part of his two unmarried daughters, who lived with him, never failed. Thus calmly, serenely, with mind unclouded and resigned to go, the end was awaited. Now it has come.

JAMES ADAMS, M.D. ABERD., F.F.P.S. GLASG.

THE Faculty of Physicians and Surgeons, Glasgow, has lost one of its oldest Fellows by the death, on Dec. 20th, of Dr. James Adams of that city. He was born in the year 1818 at Edinburgh and was the son of a physician of no small reputation; he had two brothers, also members of the same profession. At the close of his studies at the University of Edinburgh, he took the L.R.C.P. in 1841, the F.F.P.S.Glasg. in 1846, and the M.D. of Aberdeen three years later. His early graduate days were spent as Demonstrator of Anatomy with Knox, and later as assistant to Sir William Fergusson.

Dr. Adams began general practice in Glasgow and soon made a name for himself, both on account of his ability in his profession, his kindly manner, and his scientific skill in matters outside medicine and surgery. He was one of the early explorers in the great field of microscopic work, and was one of the first to investigate the action of drugs by experiments on animals. His work in connexion with the trial of Dr. E. W. Pritchard created a great sensation and brought him into prominence.

A study of the titles of his many publications reveals the many-sided character of his work: "The Disposal of

Sewage," "The Detection of Aconite by its Physiological Action, being experiments in connection with the trial of Dr. E. W. Pritchard," The Presence of Arsenic in the Vapours of Bone Manure," "The Heating Power of Coal Gas," &c. He occupied the chair of most of the learned bodies in Glasgow, including the Medico-Chirurgical Society and the Hunterian Society of Edinburgh. He also held many of the executive offices and examinerships of the Faculty of Physicians and Surgeons. During his later years he was troubled with deafness and on this account had to give up his professional work, solacing himself in his retirement with literature as a hobby; he took a keen interest in the controversies on the life and work of Robert Burns, being the author of a book entitled "Burns's Chloris" and many pamphlets. He leaves two sons, members of the medical profession, and three daughters to mourn their loss.

ANDREW SPEARING, M.D. GLASG., M.R.C.S. ENG.

OUR Belfast correspondent announces the death of Dr. Andrew Spearing which took place at his residence, Antrim, on Dec. 17th, at the advanced age of 74 years. Born in Cork (where his father was an alderman) he studied in Dublin and Glasgow, becoming L.A.H. Dub. in 1850, and M.D. Glasg. (with honours) in 1851. He was also a member of the Royal College of Surgeons of England. After commencing practice in Malahide, Dublin, Dr. Spearing went to Antrim. He was first appointed dispensary medical officer and subsequently medical officer to the Antrim workhouse. His health began to fail owing to cardiac trouble some time ago, and his work was done by a locum-tenent, but the immediate cause of death was pneumonia. Dr. Spearing was an able practitioner who enjoyed the confidence of his patients of all classes and grades.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. August Dyes of Hanover at the age of 86 years. He had been a somewhat voluminous writer on medical subjects and was much interested in the precautions necessary for guarding against trichinosis. He was also an advocate for a much larger employment of venesection than is generally adopted.—Dr. Paul Moritz Merbach of Dresden at the age of 79 years. He filled for many years the post of secretary to the Saxon Medical Association and was a lecturer in the Dresden Medico-Chirurgical Academy.—Dr. Dominik Josef Ritter von Hanschka, who was one of the professors in the old Medical Josefs-Academy, Vienna. He was 84 years of age.

Medical News.

UNIVERSITY OF LONDON.—At the M.S. examination the following candidates were successful:—

William Francis Victor Bonney, M.D., Middlesex Hospital; and William Sampson Handley, M.D., and William Tayler Milton, Guy's Hospital.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only, and is not final until the reports of the examiners shall have been confirmed by the Senate.

SOCIETY OF APOTHECARIES OF LONDON.—In December the following candidates passed in the subjects indicated:—

Surgery.—T. B. Haig (Section I.), St. Bartholomew's Hospital; J. B. Hall, (Section II.), Leeds; T. R. Holman, Guy's Hospital; C. Johnson (Section I.), Durham and London Hospital; G. G. Membery (Section II.), Toronto; O. H. Rogerson (Section II.), Leeds; M. J. Ryan, St. Bartholomew's Hospital; O. C. Sibley, Middlesex Hospital; and H. R. Weston (Section I.), St. George's Hospital.

Medicine.—G. H. Bedford (Section II.), Guy's Hospital; W. F. C. Bennett (Section II.), Sheffield; E. Grange, Edinburgh and London Hospital; K. Grube, Bonn; H. N. Horton (Section II.), Middlesex Hospital; G. G. Membery (Section II.), Toronto; O. H. Rogerson (Sections I. and II.), Leeds; and G. H. Watson, St. Bartholomew's Hospital.

Forensic Medicine.—F. C. H. Dady, Bombay; F. Elias, London Hospital; E. Grange, Edinburgh and London Hospital; K. Grube, Bonn; O. H. Rogerson, Leeds; and G. H. Watson, St. Bartholomew's Hospital.

Midwifery.—C. B. S. Amos, Royal Free Hospital; C. E. Brooks, Manchester; W. A. C. Cox, St. Mary's Hospital; W. D. French, University College Hospital; J. C. Furness, Glasgow and Charing-cross Hospital; G. R. Lucas, Edinburgh and Charing-cross Hospital; W. Roberts, University College Hospital; O. H. Rogerson Leeds; C. V. Smith, University College Hospital; and C. C. Worts Guy's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—Messrs. G. H. Bedford, C. R. Brooks, F. Elias, J. B. Hall, G. G. Membery, O. H. Rogerson, O. C. Sibley, and C. C. Worts.

UNIVERSITY OF CAMBRIDGE.—At the third examination for medical and surgical degrees, Michaelmas term, the following candidates were successful:—

Part II., Medicine, &c.—R. Ainsworth, B.A., Pembroke; W. L. Ascherson, Non-Collegiate; A. E. Bodington, M.A., Caius; W. P. S. Branson, B.A., Trinity; J. W. E. Cole, B.A., Corpus Christi; E. Cox, B.A., Caius; S. W. Curl, B.A., Downing; F. C. Eve, B.A., Emmanuel; A. T. Fraser, B.A., Caius; A. C. Fry, M.A., Pembroke; T. Gillespie, B.A., St. John's; H. Glasier, M.A., Emmanuel; H. M. Harwood, B.A., Trinity; C. L. Hawkins, B.A., Emmanuel; E. W. Hedley, M.A., King's; G. H. Hunt, M.A., Clare; O. Inchley, M.A., St. John's; A. Killick, B.A., Downing; J. E. Linnell, B.A., H. Selwyn; N. J. McCaskie, B.A., Caius; A. E. Martin, B.A., Downing; W. H. Maxwell, B.A., Trinity; W. T. Mullings, B.A., Christ's; J. P. L. Mummery, B.A., J. A. Nixon, B.A., and G. E. Orme, B.A., Caius; S. V. Pearson, B.A., Emmanuel; J. C. A. Rigby, B.A., Caius; R. N. Salaman, B.A., Trinity Hall; R. E. Sedgwick, B.A., Caius; F. Shufflebotham, B.A., Trinity; J. F. Skrimshire, St. John's; F. T. Talbot, B.A., King's; E. Talbot, M.A., Trinity; R. S. Trevor, M.A., Clare; B. R. B. Truman, B.A., Trinity Hall; R. F. C. Ward, B.A., St. John's; D. P. Watson B.A., Trinity; R. A. Wilson, B.A., Caius; and W. B. Winton, M.A., Clare.

For the recent examinations for the M.B. and B.C. degrees the following additional examiners were appointed: Anatomy, Mr. F. G. Parsons, F.R.C.S. Eng.; Surgery, Professor E. Ward; and Medicine, Dr. H. Isambard Owen. Dr. Rubemann has been reappointed University Lecturer in Organic Chemistry. Mr. J. A. H. Brincker, B.A., St. John's, and Mr. C. D. Somers, M.A., Pembroke, have been admitted to the degrees of Bachelor of Medicine and Bachelor of Surgery.

FOREIGN UNIVERSITY INTELLIGENCE.—*Cadiz:* Dr. Pedro Ramón Cajal of Saragosa has been appointed to the chair of Pathological Anatomy and Histology.—*Lemberg:* Dr. Oscar Widmann, *privat-docent* of Internal Medicine, has been promoted to an Extraordinary Professorship.—*Moscow:* Dr. N. M. Berestnieff has been recognised as *privat-docent* of Bacteriology.—*Naples:* Dr. Enrico Sava has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Strasburg:* Dr. Hermann Freund, *privat-docent* of Gynæcology, and Dr. Alfred Hoche, *privat-docent* of Neurology, have been promoted to Extraordinary Professorships.—*Tubingen:* Dr. Martin Heidenhain, Prosector in the Anatomical Institute, has been appointed Extraordinary Professor.

PRACTICE IN BRAZIL.—Authorisation to commence medical practice in Brazil has hitherto only been granted to foreign medical men after an examination conducted in the Portuguese language. This examination is now given up and Doctors of Medicine of important foreign universities will, it is understood, be recognised as qualified to practise. It may be asked whether a Fellow of the Royal College of Surgeons of England would be excluded and what universities will be deemed sufficiently important to satisfy the Brazillian authorities.

THE NOTIFICATION OF MEASLES.—The Corporation of the County Borough of Wigan have agreed to the voluntary notification of the first case of measles in a household for a further period of three years in consequence of the recommendation of the medical officer of health to the Sanitary Committee. The medical officer reported that the experiment of voluntary notification had worked well, and in conjunction with aid rendered by the School Board officers had been of much service during the last epidemic.

DUTIES OF WORKHOUSE MEDICAL OFFICERS.—At a recent meeting of the Torrington (Devon) Board of Guardians Mr. W. C. Burt, the medical officer to the workhouse, made a complaint in reference to the examination of tramps. During the epidemic of small-pox at Gloucester it was decided by the guardians to have all vagrants medically examined previously to admission to the workhouse and this practice has since been continued. Mr. Burt appealed to the Local Government Board upon the matter and at the meeting of the guardians held last week a communication was read from the Board. This stated that they considered the examination of vagrants to be outside the duties of the medical officer, who should have extra remuneration if the guardians considered the examination desirable. After a considerable discussion the members decided that the order to examine vagrants be rescinded.

THE Società Freniatrica Italiana has nominated Dr. W. W. Ireland as a corresponding member. The President is Professor Tamburini of Modena.

BRISTOL ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—A strong appeal has been made by the committee of this hospital to raise funds in order to clear off the unfavourable balance which at the end of 1898 amounted to £2800. Already nearly £900 have been subscribed.

AMATEUR DRAMATIC PERFORMANCE.—Dr. Lionel Weatherly and his amateur company recently gave a performance of "Our Boys" at the Theatre Royal, Bath, the whole of the proceeds, which amounted to over £150, going to the Mayor's Transvaal War Fund.

THE BIRMINGHAM AND DISTRICT GENERAL MEDICAL PRACTITIONERS' UNION.—A medical practitioners' union has been formed in Birmingham under the above title, to provide an effective organisation to deal with matters affecting the interests of general practitioners and to promote good fellowship among members of the profession in the locality.

ROYAL VICTORIA HOMES FOR INEBRIATES, BRISTOL.—The Home Secretary, on the application of the manager of the Royal Victoria Homes for Inebriates, Bristol, has extended the certificate to the Brentry Inebriate Reformatory for Females to allow of the reception of 40 females over and above the 35 authorised by the original certificate. He has also certified as an inebriate reformatory for males, under the Inebriates Act, 1898, certain lands and buildings situate at Brentry, Gloucestershire.

SOLDIERS' CONVALESCENT HOME, BATH.—On Dec. 18th a meeting was held in Bath in connexion with the movement for providing convalescent homes for the sick and wounded men now on their way home from South Africa. It was decided that to commence with a certain number of beds at the convalescent home at Combe Down should be used, and if necessary a separate cottage will be engaged in order to provide additional accommodation. A letter was read from Lord Wolseley in which he stated that "a convalescent home for sick and wounded soldiers near Bath would be an admirable institution. It could do good service if well looked after and administered by ladies and civilian doctors."

THE PRESERVATIVES AND COLOURING MATTERS IN FOOD.

EVIDENCE BEFORE THE DEPARTMENTAL COMMITTEE.

WEDNESDAY, DEC. 20TH.

THE Committee met again to-day, with Sir HERBERT MAXWELL, M.P., in the chair, and examined three other witnesses.

Mr. ROBERT MCCRACKEN, Managing Director of the United Creameries, Dunragit, Wigtownshire, in answer to the Chairman, said that these creameries had been going on for 17 or 18 years. Their practice was to use preservatives in milk, cream, and margarine, but not in butter, and the preservative they used was boric acid or preparations of boric acid. They dissolved the preservative in a small quantity of milk which was afterwards introduced into the large can and the whole was thoroughly stirred. They insisted that the farmers who supply the milk should not use preservatives. His opinion was that in these days, when milk was sent long distances, it was absolutely necessary to use preservatives. If it were the case that a large quantity of the milk supply of London was free from them, it must be consumed very quickly or it must have been very well cooled or refrigerated. His company sent milk to London, the milk leaving them one morning and reaching London on the following morning. They only used preservatives in milk in the warm weather, and they never introduced into their can of 16 gallons more than one ounce of boric acid. No action had ever been taken against them, nor had there been any complaints about the presence of preservatives.

By Professor THORPE: They added boric acid to margarine to make it keep longer, just as they added salt, and he was not aware of absolutely fresh margarine being consumed anywhere. They had tried experimentally sterilised milk, but he did not like the flavour of it, and he could not believe that it would ever become popular.

By Dr. BULSTRODE: If all milk were refrigerated at the farms, there would, no doubt, be less need for preservatives, but at many farms there were not the means of refrigeration. He should have no objection to some restriction being placed on the use of preservatives, because he recognised the risk of an excessive quantity being introduced as the article passed from hand to hand.

By the CHAIRMAN: For colouring purposes they chiefly used annatto, but they also used anilines, the object being to suit the taste of the different markets. He admitted that one object in colouring margarine was to make it resemble butter. As to legislation to prohibit colouring he would say that if it were to be applied at all it should be applied all round and not merely to dairy products.

In cross-examination by Dr. TUNNICLIFFE and Professor THORPE, witness said that they bought the aniline colours as butter-colouring preparations without any declaration from the vendor as to their constituents, and indeed he had no knowledge of their constituents. Professor Thorpe assured the witness that many of these dyes contain most noxious substances, including Martius' yellow, which goes to the making of lyddite.

Mr. CHRISTOPHER J. DUNN, chairman of the Cork Butter Market Trustees and a Governor of the Munster Dairy and Agricultural Institute, was the next witness, and in the course of his examination he stated that while the butter-makers who send their produce to the Cork market and receive its brand do not, as a rule, introduce preservatives, the butter factories and creameries are in the habit of using soluble borax. The trustees of the market differ in their views as to whether the prohibition of preservatives would benefit or injure the Irish butter trade, but for himself Mr. Dunn expressed the opinion that if prohibition or restriction were resorted to the trade would adapt itself to the new circumstances and find other means—probably the development of the cold storage system of preserving the butter. He objected altogether to the idea that Irish butter was inferior in its keeping properties to other butter. On the subject of colouring he said that the taste for highly coloured butter was declining so far as the experience of the Cork market went and that the colours mostly used were saffron and annatto.

Mr. THOMAS BOND, consulting surgeon to the Westminster Hospital, the third witness examined, said in reply to the Chairman that for many years he had given boric acid in doses of 10 grains three times a day. He had given it in bladder diseases as an antiseptic and he had never found any ill-effects constitutionally to follow upon its administration, though the administration were kept up for weeks and even for months. Of course if patients were taking it from other sources he should like to be made aware of the fact.

Would you say that you ought to know it?—No, I do not think I could go as far as that. It depends on the quantity that they are taking.

Does it not seem to be attended with some risk that a drug prescribed by you should be liable to be taken from other sources in uncertain quantities?—No, it does not. I often prescribe nitrate of potash and I never take the precaution to find out whether the patients are eating ham or other things that contain nitrate of potash very often in large quantities.

In reply to further questions Mr. BOND said that in the case of a child he would only prescribe a small dose of boric acid. He had known boric acid produce itching of the skin, but that was where the patient had kidney disease. In perhaps half a dozen cases he had had to stop boric acid because of the itching of the skin and rash. He was, however, quite prepared to support the proposal that the presence of boric acid should be notified to the purchaser. While doing so he still maintained that it was an absolutely innocuous preservative.

By Dr. BULSTRODE: If he were asked to prescribe a limit beyond which it would be dangerous to give boric acid to a child, he should say that he could not name a limit, because he had never found the danger. The cases in which he had stopped the boric acid were cases of old men with dropsy in their legs and renal disease. In his opinion about five grains to the pint constituted a safe preservative for milk.

Would you say that it is safe for a child to take in this way 20 grains a day?—That would be four pints. That would be rather too large a quantity to give to a child, although I tell you I do not know any harm that has resulted. I should not give it myself.

You think that it might be dangerous?—I think that it might not be advantageous to the child.

In further examination by Dr. BULSTRODE witness said that he had used boric acid externally in surgical cases and without any bad results. He had a case of a child with a bladder which was absolutely unable to hold urine. The child was in a most horrible state of filth, and they kept it for more than six months in a boric acid bath and the child was now alive and well. He had read the account of Dr. Annett's experiments with kittens, but he did not think that they were worth much. Dr. Annett had 10 grains of boric acid in a pint of milk. Now about three kittens newly-born would go to one pound and a newly born child weighed about seven pounds. Therefore the proportion of dose given to the kittens was exceedingly large. Assuming that the newly-born child took two pints of milk per day that would mean 20 grains of boric acid, and assuming the kitten took half a pint that would mean five grains. There being over 20 kittens to the weight of a baby the proportionate dose for the kitten would be less than one grain. He believed that an equal dose of salt would have an effect equally deleterious as boric acid. He had given salicylic acid in 10-grain doses, and he had never seen the slightest ill effects. He had never seen delirium produced by salicylic acid. In this case, as in boric acid, he quite agreed that the presence of the thing should be notified to the purchaser. In a recent prosecution he had given the opinion that two grains of salicylic acid in one pound of jam were absolutely harmless. They constituted an efficient preservative and he was certain that they were harmless. He thought the one pound of jam would do much more harm than the two grains of salicylic acid.

The Committee then adjourned.

THURSDAY, DEC. 21ST.

The Committee met again to-day with Sir HERBERT MAXWELL in the chair, and proceeded with the examination of witnesses.

Mr. JAMES BRIERLEY, public analyst for the county borough of Southampton, who was the first witness, said in the course of his examination that during his 25 years' experience he had found formalin and boric acid in milk and butter and salicylic acid in wine. He had come to the conclusion that the use of preservatives was on the increase in Southampton and the surrounding district. The Committee might take it that the practice was to introduce about 100 grains of the preservative to the gallon of milk. The preservative was only used in the summer season, and in his experience he often found people to complain that though the milk might not smell sour still it was in an unsatisfactory condition. His suggestion was that the preservative should be limited to formalin, which, he said, was used in smaller quantity than other preservatives, and which, if used in a large quantity, gave out an unpleasant odour and thus betrayed its presence. He admitted that a declaration would do good, but he did not think it would suffice. His idea about butter was that it did not require a preservative if it were properly made. He had examined samples of foreign milk imported at Southampton and found them to contain more formalin than the home milk. He did not think

that in the present state of our knowledge of the effect of these preservatives on the human system it was possible to lay down a limit beyond which they should not be used, and he strongly recommended that steps should be taken—say, at large institutions—to ascertain the results of milk containing preservatives. He also considered the addition of preservatives to wine to be unnecessary. With regard to colouring Mr. Brierley said he found inferior butter coloured to look like superior and margarine to look like butter, but he was not aware of any ill effects from colouring.

Mr. W. F. LOWE, analyst for the counties of Flint, Carnarvon, Anglesea, and Denbigh, and the city of Chester, said he considered that the use of food preservatives, in all but a very few cases, should be entirely prohibited, the necessity for them being obviated by the use of cold storage. In most cases preservatives could hardly fail to be more or less injurious to health, and especially to weak or young persons. During the hot weather of last summer, a sample of milk was brought to him for examination for preservatives, because it was believed to have made a child of two months seriously ill. The milk contained a very small amount of formalin, and probably it would not have been at all injurious to strong persons. As a matter of fact, no one else in the house suffered from it. The child in question suffered from very troublesome vomiting and the medical man who attended it attributed the illness to the formic aldehyde acting as an irritant. In his opinion the habitual use of powerful drugs used as preservatives was very liable to injure the digestive organs of strong people by retarding or arresting the action of the natural ferments of the human body. Another great objection to the use of preservatives was that they could be added to food which was already beginning to undergo decomposition and which was therefore unfit for human consumption. A powerful preservative arrested decomposition and made the food appear to be good and sound. Salicylic acid, for instance, was largely used in the manufacture of jam and no doubt chiefly on account of its property of arresting the fermentation of unsound fruit. As to quantities he had found boric acid in butter in amounts ranging from eight to 50 grains per pound and in milk and cream from six to 20 grains per pint. He had had many instances of peas and beans coloured with copper. Most of the samples came from France and Italy, but these articles were now being coloured in this way by several English firms. The quantity of copper present was usually from 0·007 per cent. to 0·01 per cent., or about one-half to three-quarters of a grain of metallic copper per pound. On one or two occasions he had found a larger amount, but the usual amount was equal to about two or three grains of sulphate of copper per pound. It appeared that there was a very strong attempt being made to legalise the sale of these articles, for most of the cases taken into court in his district had been defended by the wholesale dealers, often at considerable expense, but he had obtained a conviction in almost all his cases. The condition of things, he thought, was very well expressed by a reply given by the medical officer of health for one of his districts in the course of a trial before the magistrates. The medical officer of health was asked by the chairman (a very big, strong man) whether the peas would do him (the chairman) any harm, and his reply was, "No, very probably they would not do you any harm, but (turning to another of the magistrates who was a much older man and had recently recovered from a severe illness) they might probably kill Mr. B." As to the colouring of margarine he was of opinion that if it were prohibited it would probably destroy the sale of this cheap, useful, and wholesome article of food.

Dr. M. K. ROBINSON, medical officer of health for East Kent, was next examined. In reply to the Chairman he said that at the latter end of September, 1895, he was requested to investigate a sudden and serious outbreak of illness in a religious house in Dover, containing five sisters, cook, and housemaid. Although no fatal results occurred the symptoms were severe, including especially colic and protracted vomiting, with suppression of urine, and great prostration, involving protracted convalescence. Five out of the seven inmates were attacked within a short period of each other, thus indicating some common origin as the source of the mischief. Suspicion at the onset was attached to the milk supplied to the household, which the five who suffered had partaken of, whilst the two who escaped had not so participated. The first two were attacked at about 5 o'clock in the afternoon, the others suffering during the same night and following morning. The implicated milk was taken alone, blended with tea, or in the form of blanc mange. To the morning and afternoon supply of the milk partaken of on the day of seizure the cook added a preservative known as "glacialene." A sample of the packet from which the glacialene was taken was analysed and found to contain, as its basis, boric acid. A specimen of the milk supplied by the dairyman was also analysed and also found to contain boric acid. Thus, for the same purpose, a preservative had been added to the milk both before and after its delivery at the house by which treatment an overdose was unintentionally administered. Permission was obtained to give the portion of non-consumed blanc mange to nine fowls; five devoured the food with avidity and thus secured a larger portion than the remaining four; the five were vigorous pullets, but all died; the remaining four, although suffering from loss of appetite and diarrhœa, ultimately recovered. The crop and gizzard of one of the fowls was submitted for analysis and tyrotoxicon, ptomaines, and mineral poisons searched for, but boric acid alone was found and that in considerable quantity. Antecedently to the analytical investigations inquiry had been instituted at the dairy and no illness at the dairyman's house or amongst the cows had been known to exist. On the premises where the outbreak occurred the water-supply was pure and beyond suspicion and the sanitary arrangements most satisfactory in character. After elimination of other causes the evidence pointed to boric acid as the real factor which gave rise to the illness in the above-mentioned cases. Such results indicated the necessity for precaution being taken when prescribing the drug for medicinal purposes, and also in respect to its use as a food preservative, for if such results could be produced in the case of adults it was not unreasonable to presume that infants could not take with impunity long-continued doses in their staple food of milk. He regretted that a quantitative analysis had not been taken, but the analyst assured him that boric acid was found in considerable quantity. In his own experience he had had to give up the prescription of boric acid because of the bad effects following its administration. He was strongly of opinion that boric acid should not be added to milk. Formalin was now used only because boric acid had been found out, and he supposed that when formalin was found out the sophisticators would turn to something else which would serve their purpose. His opinion was that these atrocious additions enabled milk purveyors to adopt dirty habits, to sell milk in the initial stage of putrefaction, and to sell milk from diseased cows.

By Dr. BULSTRODE: The inmates of the house who did not suffer had consumed but a small amount of the milk. It was proved that the milk contained boric acid, and they had the admission of the cook that she added glacialene, which on analysis was found also to contain boric acid. The blanc mange was not analysed, but the crop and gizzard of the fowl contained boric acid. A great many cases of diarrhœa and enteritis occurred in Dover at the time and he was not prepared to say that they were not due to this milk. Knowing that boric acid was largely used in this manner in a particular district he urged the district council to instruct their analyst to examine the milk because of the largé number of cases of intestinal disturbance. His opinion was that these preservatives were not required in milk, which could be preserved by other means.

In answer to the CHAIRMAN, Dr. ROBINSON undertook to ascertain if possible the amount of milk consumed by the persons who suffered in the Dover case and the amount consumed by the persons who did not suffer.

The Committee then adjourned.

FRIDAY, DEC. 22ND.

The Committee held another meeting to-day, when Sir HERBERT MAXWELL again presided.

Mr. WYNTER BLYTH, M.R.C.S., L.S.A., examined by the CHAIRMAN, said that he had been a public analyst almost from the passing of the first Sale of Food and Drugs Act. In his early experience it was a rare thing to find aniline colours in food, the usual matters being cochineal, the various hues of sugar, saffron, and so forth; but during the last eight or 10 years the rule, and not the exception, had been to use the so-called tar colours, which he had found in sweetmeats, jams, jellies, and in one sample of burgundy wine, and which he had suspected in butter. In a few cases he had found them in vegetables. In a great many cases he had found copper present but not to any very large amount, and, of course, copper was a natural constituent of vegetables. He could not say that he had ever found aniline dye present in any one substance, in a measure which, assuming aniline dye to be poisonous, would be enough to injure health, but one had to consider that so many things were coloured in this way that the question became one of the collective amount consumed say in the course of a day. In Germany certain colouring matters were prohibited, including picric acid. His opinion was that in this country injurious colours ought to be prohibited and that such a step was quite practicable. Under the present system public analysts received so small a quantity for analysis that it was often very difficult to identify the particular dye present, but if the Legislature prohibited definite colouring matters, the practice no doubt would be altered and analysts would receive larger samples and be able to identify fully the colouring matter used.

By Professor THORPE: If a particular dye were once scheduled, attention would be drawn to the best tests and the best methods of separating it. Bearing out his statement that copper was a natural constituent of vegetables, he might say that he had found it in peas, flour, and bread, in cigar ash, and in the ash of the lime tree. Other analysts had found it in many other substances. His method was to incinerate the article in a platinum dish over an ordinary Bunsen burner. He was not aware that it had been shown that any substance incinerated over an ordinary Bunsen burner would give copper in the ash and he should be surprised if such were found to be the case.

By Dr. BULSTRODE: His idea was that there should be a classification of colouring matters which could be altered from time to time in the light of experience, and he thought that the matter might very safely be left in the hands of some central authority, such, for instance, as the Local Government Board or the Board of Agriculture. The recommendation of the Select Committee on the Adulteration of Food Products for the establishment of a court of reference was, in his opinion, a very useful and practical one, and he thought all analysts would be of the same opinion. The matter must be decided rather upon general principles than upon specific evidence. He did not see how they were to obtain specific evidence, for it was obvious that they could not experiment upon human beings and experiments upon animals must be done upon a large scale and by different people to have very much value. With regard to copper in peas, he should be disposed to say that anything over and above that which would combine with the colouring matter of the pea would be, or at any rate might be, injurious. He could not give evidence that five grains of sulphate of copper per pound of peas would injure health. In his opinion it was certainly wrong to alter the colour of an article by the use of a strong poison simply in order to make it more attractive. He agreed that in every case the nature and quantity of the colouring matter should be declared.

By the CHAIRMAN: The only common antiseptics used now were borax, boric acid, salicylic acid, and formaldehyde. In London it was only in summer time that he came across a large number of samples of milk with borax or boric acid, though within the last few days he had found a sample which contained an amount of boric acid equivalent to 80 grains of borax to the pint. He disapproved of this drug being added to an almost universal article of food unknown to the consumer, but at the same time he must say that it would be very difficult for the legislature to prohibit it altogether. In the case of London the greatest bulk of the milk came from the country and in the heat of summer he should imagine that quite one-third of the milk-supply would be spoiled before or after it reached the metropolis unless some preservative were used. This observation, of course, applied to the present system of organisation, and if means could be devised for bringing the milk quicker to London and getting it quicker disposed of, then, perhaps, the preservative might not be necessary. His opinion was that when a preservative was added to milk the fact should be made known to the consumer. Asked whether he had any preference for a particular preservative Professor Wynter Blyth said he thought formalin better than boric acid; at the same time his opinion in this matter had been somewhat shaken by the evidence of Dr. Annett with regard to his experiments on kittens.

By Dr. BULSTRODE: Although he had not seen any ill-effects from boric acid himself still he thought the evidence was quite sufficient to show, with regard to infants, that it was injurious to health in fairly large doses or even in small doses continued for a long period of time. His opinion was that in present conditions large cities and towns could not be supplied with milk without recourse to preservatives during the hot weather.

Mr. RICHARD BANNISTER, late deputy-principal of the Inland Revenue Branch of the Government Laboratory, was the next witness, and in the course of his examination he defended the use of borax in the ham and

bacon trade, saying that it enabled the public to get an article in accordance with its taste and to get it at a cheaper price than would be possible if the meat were brought to this country fresh in refrigerators. He also defended the use of preservatives in butter. The public, he said, was not satisfied with salt and, indeed, a large percentage of butter came to this country which contained no salt. He regarded boric acid or some such preservative as a necessity in the butter trade. With regard to milk it was difficult, he said, to come to a decision. In these days milk came to large cities and owns from a great distance and in the summer time very frequently the so-called new milk reached the table in an acid condition. If borax would keep it from getting sour then he thought the borax would not do so much harm as the sour milk. He saw no objection to a provision requiring the vendor to declare the presence of a preservative, though there would be practical difficulty in stating the amount. On the subject of colouring matters Mr. Bannister said he knew a large commercial house which sold a considerable quantity of peas. They divided the peas into two classes which were set out in the price list, one class containing copper and the other peas in their natural colour. The peas with copper represented 92·2 per cent. of the total sales and those without it 7·8 per cent. The quantity of copper required for colouring did no harm and he thought it would be a hardship if it were prohibited. He could not agree that there was anything in the nature of fraud in the transaction, the object of the copper being simply to bring the peas back to their natural colour. Peas could only be produced at one period of the year and the public desired to have them all the year round and knew very well that they were coloured. He admitted that in the case of the first class it was not stated in the price list that the peas were coloured with copper. Even supposing that all the copper were to go into solution, he did not see that any harm would result. He had looked carefully for evidence of ill-effects from eating copper-coloured peas, and had failed to find any such evidence. At the same time, he saw no objection to the label setting forth that the peas had been artificially coloured with copper.

The Committee then adjourned, to meet again in three weeks.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
Rhinoplastic Operations. By D. F. Keegan, M.D. Dubl., F.R.C.S. Eng. Illustrated. 1900. Price 5s. net.
Heart Disease: with Special Reference to Prognosis and Treatment. By Sir W. H. Broadbent, Bart., M.D. Lond., and J. H. Broadbent, M.A., M.D. Oxon., M.R.C.P. Third edition. 1900. Price 12s. 6d. net.

BELL, GEORGE, AND SONS, York-street, Covent-garden, London.
The Lute and Lays. By C. S. Welles, M.D. 1899. Price 3s. 6d. net.

BLACK, A. and C., Soho-square, London.
Microscopic Researches on Glycogen. By C. Creighton, M.D. Part II. With Plates. 1899. Price 7s. 6d. net.

CHATTO AND WINDUS, St. Martin's-lane, London.
Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. Thirty-sixth annual edition. 1899. Price 1s. 6d.

CHRISTISON, J. S., Chicago.
Crime and Criminals. By J. S. Christison, M.D. Second edition. 1899.

CLAY, W. F., Teviot-place, Edinburgh.
Clinical Studies in Vice and Insanity. By Geo. W. Wilson, M.D. 1899.

DEACON, C. W., AND CO., London.
The Dream: A Phantasy. By G. H. R. Dabbs, M.D. 1900.

F. A. DAVIS COMPANY, Philadelphia.
Studies in the Psychology of Sex. By H. Ellis. Vol. ii. 1900.

GRIFFIN, C. AND CO., Exeter-street, Strand, London.
Clinical Medicine. By J. S. Bury, M.D. Lond., F.R.C.P. Second edition. Illustrated. 1899. Price 21s.

KEGAN PAUL, TRENCH, AND CO., Charing Cross-road, London.
A First Book in Organic Evolution. By D. K. Shute, A.B., M.D. 1899. Price 7s. 6d. net.
Science and Faith. By Dr. Paul Topinard. Translated by T. J. McCormack. 1899. Price 6s. 6d. net.

KEMP AND CO., Bombay, and 84, Leadenhall-street, London.
Kemp and Company's Prescriber's Pharmacopœia. Fourth edition. 1899-1900.

LONDON HOSPITAL GAZETTE.
London Hospital Souvenir. 1899.

MACMILLAN AND CO., London.
A System of Medicine. Edited by T. C. Allbutt, M.D. Vol. viii. 1899. Price 25s.
A Manual of Surgery. By Charles Stonham, F.R.C.S. Eng. In three vols. Vol. iii. 1899. Price 10s. 6d. net.

PRINTED FOR THE ASSOCIATION OF AMERICAN PHYSICIANS, Philadelphia.
Transactions of the Association of American Physicians, Fourteenth Session. May, 1899. Vol. xiv. 1899.

REBMAN COMPANY, Shaftesbury-avenue, London.
The Pathology and Treatment of Sexual Impotence. By Victor G. Vecki, M.D. Second German edition. 1899. Price 12s.
Psychopathia Sexualis. By Dr. R. Krafft-Ebing. English translation of the Tenth German edition. 1899. Price 21s. net.

SMITH, ELDER, AND CO., Waterloo-place, London.
Dictionary of National Biography. Edited by Sidney Lee. Vol. LXI. Whichcord—Williams. 1900. Price 15s. net.
Unwritten Laws and Ideals of Active Careers. Edited by R. H. Pitcairn. 1899. Price 7s. 6d.

STATE HOSPITALS PRESS, Utica, New York.
Archives of Neurology and Psycho-pathology. Vol. ii. Nos. 1, 2. 1899.

STEINHEIL, G., Paris.
La Pratique des Accouchements Obstétrique Journalière. Par H. Varnier. 1900.

WRIGHT AND POTTER, Post Office-square, Boston, U.S.A.
Thirtieth Annual Report of the State Board of Health for Massachusetts. 1899.

WRIGHT, J. AND CO., Bristol.
Pye's Surgical Handicraft. By B. M. H. Rogers, B.A., M.D., B.Ch. Oxon. Illustrated. 1900. Price 10s. 6d.

Magazines, &c., for January: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Myra's Journal, Pall Mall Magazine, Windsor Magazine, English Illustrated Magazine, Knowledge, Humanitarian, Wide World Magazine, New Century Review, Munsey's Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ALEXANDER, J. D., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Portheawl Sanitary District, South Wales.

BARTLETT, G., M.B., C.M. Edin., has been appointed a Member of the Irwin District Board of Guardians, West Australia.

FAGAN, A. ST. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Upper Holloway Central District.

FLEMING, G., M.B., C.M., M.R.C.P.E., has been appointed Medical Officer for the Omberaley District of the Droitwich Union, vice G. Capel Hall.

FRANKLIN, T. R., L.R.C.P., L.R.C.S. Edin., has been appointed Visiting Surgeon to the Parramatta Gaol, New South Wales, vice W. B. Violette.

GOODE, A., M.B., B.S. Adel., has been appointed a Public Vaccinator for South Australia.

GOUGH, JOHN HARLEY, F.R.C.S. Edin., L.R.C.P. Lond., has been appointed Honorary Physician to the Western Hospital for Consumption, Torquay, vice T. R. Lombe.

HALFORD, A. C. F., M.B., Ch.B. Melb., has been appointed Medical Officer at Clermont, Queensland, vice E. N. Scott, resigned.

HAMILTON, T. K., M.D. Dub., has been appointed President of the Medical Board of South Australia.

HARBISON, W. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to attend destitute poor and aborigines at Georgetown, South Australia.

HEATH, A., M.B. Lond., F.R.C.S., L.R.C.S. Lond., has been re-appointed Medical Officer for the Fifth Sanitary District of the Aylsham Union.

HILL, A. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Certifying Surgeon under the Factory Acts for the Urban District of Tunstall.

LENDON, A. A., M.D. Lond., M.R.C.S., has been appointed a Member of the Medical Board of South Australia, vice D. Paterson, resigned.

LIDDLE, P. H., M.B., Ch.B. Melb., M.R.C.S., has been appointed Officer of Health for the Shire of Huntley, Victoria, Australia, vice W. T. Haise, resigned.

LLOYD, R. R., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Infirmary of the Parish of Fulham.

MACGOWAN, E. T., M.B. Melb., has been appointed House Surgeon to the General Hospital, Hobart, Tasmania.

RAMSAY, J. R., M.B. Lond., has been appointed a Public Vaccinator at Mount Magnet, West Australia.

ROSE, GEORGE, M.B., C.M., D.P.H. Aberd., has been appointed Surgeon to the Royal Aberdeen Hospital for Sick Children, vice A. I. Garden, resigned.

ROWLANDS, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the Workhouse, Bromsgrove Union, vice H. C. Kidd, resigned.

STURROCK, A. CORSAR, M.A., M.D. Edin., has been appointed Resident Medical Officer to the Royal Infirmary, Manchester.

THOMPSON, WALTER, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed an Honorary Surgeon to the Hospital for Women and Children, Leeds.

TINSLEY, S., L.F.P.S. Glasg., has been re-appointed Medical Officer for the Wetwang Sanitary District of the Driffield Union.

WOOD, E. STANLEY, L.R.C.P., M.R.C.S., has been appointed by the Town Council Medical Attendant at the Borough Infectious Diseases Hospital of Cambridge.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ABERYSTWITH INFIRMARY.—House Surgeon. Must also act as Secretary. Knowledge of Welsh essential. Salary £150, with the usual residential allowances (stimulants excepted).

ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—House Surgeon. Salary £100 a year, with board and lodging.

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester-street, London.—Dental Surgeon.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Birmingham.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon, male. Salary £80, with board, residence, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at the rate of £50 per annum, with board and residence in the hospital.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Second House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CITY OF YORK.—Medical Officer of Health. Salary £400 per annum. Apply to the Town Clerk, Guildhall, York.

COUNTY OF SUTHERLAND.—Medical Officer of Health for the County of Sutherland. Salary £300 per annum, and £50 in lieu of travelling and other expenses, with certain exceptions. Apply to the County Clerk, Golspie.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant Surgeon.

LEICESTER INFIRMARY.—House Physician for 12 months. Salary £100 per annum, with board, apartments, and washing.

LONDON HOSPITAL, Whitechapel, E.—Assistant Physician.

MIDDLESEX HOSPITAL, W.—Assistant in the Cancer Research Laboratories. Salary £100 per annum, with an honorarium of £50 after his second year of office.—Also Assistant Anæsthetist.—Also Physician.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury, London.—House Physician. Salary £100, with board and apartments.

PARISH OF GAIRLOCH, Ross-shire.—Medical Officer. Salary from the Parish Council £200 per annum, besides private practice. To reside at Poolewe. Apply to Mr. James Mackintosh, Inspector of Poor, Poolewe.

PARISH OF ST. MARY, Islington.—Medical Man as Medical Superintendent for the new Infirmary at Highgate-hill. Salary £500 per annum, with unfurnished residence, coals, gas, and washing, subject to statutory deductions. Applications to the Clerk to the Guardians, St. John's-road, Upper Holloway, N.

RADCLIFFE INFIRMARY, Oxford.—House Physician.

ROYAL INFIRMARY, Sheffield.—Junior Assistant House Surgeon. Salary £50 per annum, with board, lodging, and washing.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, London.—Honorary Assistant Medical Officer.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Senior Resident Medical Officer for one year. Salary £80 per annum, with residence in the hospital, board, and washing.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck-street, London.—Resident Medical Officer. Salary 100 guineas per annum and an annual increase of 10 guineas to a maximum of 120 guineas, with furnished apartments, attendance, coals, and light.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, London, S.E.—Demonstrator of Physiology.

THREE COUNTIES ASYLUM, near Hitchin.—Second Assistant Medical Officer. Salary £150 per annum, with board, apartments, washing, and attendance. Unmarried. Apply to the Clerk, St. Neots, Hunts.

Births, Marriages, and Deaths.

BIRTHS.

BELL.—On Dec. 19th, at Brae Lossie, Higher Broughton, Manchester, the wife of William Bruce Bell, M.B., C.M. Edin., of a daughter.

BOKENHAM.—On Dec. 25th, at Devonshire-street, Portland-place, W., the wife of Thomas J. Bokenham, M.R.C.S., of a daughter.

BROWN.—On Dec. 27th, at 6, Gibson-square, Islington, N., the wife of George Brown, M.R.C.S. Eng., of a son.

CRAWFURD.—On Dec. 21st, at Harley-street, W., the wife of Raymond H. P. Crawfurd, M.D., of a son.

MACKAY.—On Dec. 19th, at the Cloisters, Knaresborough, the wife of Ian D. Mackay, M.B. and C.M., of a daughter.

DEATHS.

MEADE.—On Dec. 24th, at Mount Royal, Bradford, Yorks, Richard Henry Meade, F.R.C.S., J.P., aged 86 years.

OGILVY.—On Dec. 23rd, suddenly, at Frimley Lodge, Frimley, Surrey, Surgeon-General John Ogilvy.

POPE.—On Dec. 23rd, at Woodridings, Pinner, Mary, widow of John Robinson Pope, M.R.C.S. Eng., L.S.A., of Woodridings, Pinner, and Montagu-square, W.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

SHOULD PHYSICIANS TELL THEIR PATIENTS THE TRUTH WHEN THEY ARE PAST HOPE?

A MISSOURI judge recently delivered a decision to the effect that if the medical man is aware that the patient is past cure or that his treatment will probably be of no benefit "it is his duty to advise his patient of these facts and if he fails to do so he is guilty of a breach of trust." This decision has been much discussed among medical men in the United States and the majority of them are inclined to think that the Missouri judge is mistaken in his views, arguing that in many instances such a pronouncement would have a fatal result upon the patient. Dr. George F. Shrady, who was interviewed on the matter in the *New York Herald*, does not believe it to be advisable to tell the patient point-blank that he is past recovery, and says: "Generally speaking, the medical profession does not believe it best to render the final verdict directly to the doomed patient. The exceptions to this opinion are very few indeed and are only to be considered in connexion with the most earnest solicitation of the sufferer. Even then previous promises must be often qualified at the last moment. ..... The business of being resigned to death never helps anyone to get well. When we welcome the seemingly inevitable issue we admit that there is nothing else left for us. It is always the sinking ship without the pump. Resignation is always a last choice. This is never more strikingly manifested than when the physician and clergyman are at the bedside of the stricken one to tender the last sad services of their respective callings. If there is any hope left for life there is no question as to whom the patient would look for the succour he needs in such a dire emergency." After all is said the question as to the wisdom of informing a patient of his hopeless condition is one that in all cases had better be left to the discretion of the physician. It certainly would not be a right course to pursue to allow a patient to die without giving him the opportunity to transact his necessary business and to receive the consolations of religion. On the other hand, to state the truth in an abrupt way would, in many instances, be by the withdrawal of hope to hasten the end. And it should be borne in mind that a medical man is not infallible. Undoubtedly the wisest way is to inform the patient's relatives of his condition, so that the knowledge may come in an indirect manner. Few medical men will be found to agree with the Missouri judge that it should be made obligatory by law for a medical man to inform his patient that his case is hopeless.

"AMERICAN INSURANCE SOCIETIES."

To the Editors of THE LANCET.

SIRS,—Your correspondent, Dr. Carruthers, in THE LANCET of Dec. 16th (p. 1714), admits the correctness of my statement that in the case of policies with American societies "the premiums thereon are not allowed as deductions for income-tax purposes." Many will thank him for his information that one American society "puts its policy-holders right by refunding the amount of income-tax paid," but I hazard the suspicion that it will be news to several of those insured even with the "Mutual," whose practice he cites. There are, however, other American insurance associations besides the Mutual, and I am insured in one of them. This company, which claims to be "the oldest international life insurance company in the world, supervised by 82 Governments," and having "accumulated funds ..... amounting to £44,400,000," does not make any such allowance, and therefore the strictures of your correspondent on the unscientific attitude of which he accuses me are hardly justified. In view of all the facts I think I am still warranted in signing myself

Yours faithfully,

Dec. 20th, 1899. A VICTIM.

"THE FINAL EXAMINATION FOR THE BACHELOR DEGREE IN MEDICINE AT LONDON UNIVERSITY: A GRUMBLE."

To the Editors of THE LANCET.

SIRS,—I am glad to see in your columns a protest against the utter lack of consideration for examination candidates shown by the London University. The grievance that "A Successful Candidate" dwells on particularly is the time that he was kept waiting for his *viva voce* examinations after the hours appointed—four hours on one day and five hours on the next. His experience is by no means exceptional, but is shared in greater or less degree by many men at every examination. In 1894 I was kept waiting only two hours after the appointed time for my midwifery "viva"; but as the time appointed was just my ordinary lunch time I was feeling sick and faint by the time I was admitted. All I could do, then, was to yawn copiously, and in this demonstration the examiner joined. I am amused at the following remark in your correspondent's letter: "The authorities at Burlington Gardens would probably ask why it is that no complaints are ever made about it. ..... A successful candidate does not care to take the trouble ..... while the unfortunate candidate who is ploughed refrains because he knows it would be put down to the 'snarlings' of a disappointed man," &c. "A Successful Candidate" may be interested to

know that some years ago I wrote to the authorities and complained of the inadequate supply of materials for the practical histology examination in the Intermediate M.B. I made such definite statements as that it was impossible to procure filter papers or spirit lamps; that some microscopes had nose-pieces, some had not. I was told that the apparatus had all been carefully inspected immediately before the examination, that no other complaints had been made about it, and that it was quite adequate for any man who knew how to use it. And this in spite of the fact that I had passed the examination in the first division.

I am, Sirs, yours faithfully,

Dec. 19th, 1899. M.B. LOND.

THE "KILLGERM" TYPHOID BUCKET AND BED-PAN.

ANY invention the object of which is the isolation of typhoid-infected excreta during its removal from the sick chamber is worthy of attention, and the vessels under notice have this object in view. Both bucket and bed-pan are made of very stout white earthenware of such a thickness as to greatly limit any chance of breakage, but the chief feature is a gas-tight lid which is retained in its place by a three-way bar, the ends of which fit into the rim of the vessels through a bayonet catch-like slot. By slightly turning a screw the vessels are practically hermetically sealed, as a rubber band forms a pad between the rim of the lids and the rim of the vessels. These vessels will no doubt be found very useful for the purpose intended, but in noticing a similar invention in THE LANCET of May 28th, 1898, we pointed out that if an asbestos band could be substituted for the rubber one it would be an improvement, as the asbestos could be cleaned by placing it in a flame. The same remarks apply to the "Killgerm" vessels. The address of the agents is the "Killgerm" Company, Limited, Cleckheaton.

THE ORGANISATION OF THE PROFESSION: SUGGESTIONS INVITED.

To the Editors of THE LANCET.

SIRS,—At a meeting of a local medical society a suggestion was made that a scheme should be started for the formation of a comprehensive Medical Provident Society, the idea being that many men with families, earning a small wage, are unable to pay the ordinary professional fees and are from this cause driven to seek attendance for themselves and families at the dispensary connected with the hospital. We would be glad to know if any of your readers have any experience of such a scheme elsewhere and would give hints as to how we should proceed.

I am, Sirs, yours faithfully,

Dec. 27th, 1899. THE HON. SECRETARY.

*** Our publication "The Battle of the Clubs" and other articles in our columns give all the information sought.—ED. L.

THE BURDEN OF THE LONDON MEDICAL STUDENT.

To the Editors of THE LANCET.

SIRS,—It has been pointed out in your columns that the average medical student is poor—that he does not originate from the rich or favoured classes of the community. Not a few have to earn their bread-and-cheese whilst carrying on their medical studies and the preliminary payment of their hospital fees is often as much as their fathers can do for them. The majority are anxious to qualify early in order to make a living and also to gain that experience which practice alone can give and which the unqualified cannot obtain. Possibly others look to them for an early return for the money invested in hospital fees. A qualification which has been a help to hundreds in the past in these very particulars is the L.S.A. London and the comparative cheapness of the diploma has been a mighty boon to many a struggling student to whom the fees of the Conjoint Board of the London Colleges would have been a formidable barrier. Now there is a proposal to amalgamate the licence of the Society of Apothecaries with those of the two Colleges by holding one examination for the three licences, but nothing has been said as to the fee which is to be extracted from the unfortunate aspirant to the ranks of medicine. It is well known that the Royal Colleges have "waxed and grown fat" at the expense of their candidates for diplomas. Now, Sirs, I would suggest that if there be an amalgamation of the licensing bodies in London the cost of the triple diploma should not exceed £20 as the number of candidates will be larger and there will be a monopoly. Secondly, as regards degrees. Aspirants for medical degrees of the old universities are usually of affluent or "well-to-do" parentage. They have this important advantage; but this is less important than another, which is that their final examination is split up into two or more segments. London University students, on the other hand, are frequently handicapped by comparative poverty. They have also the disadvantage that they must pass in all their subjects in the Final M.B. examination at one time. Failure in one subject sends them all over the three others once more at the next attempt. Moreover, the marking standard is high and the percentage of rejections nearly 50 per cent. Now, Sirs, this requires reform. The Preliminary Scientific and Intermediate examinations are very rightly each segmented into two parts. Why not the Final—medicine and surgery forming Section (A) and obstetric and forensic medicine Section (B) of the examination? This would certainly not lower the standard of attainment in the subjects, but it would greatly facilitate the graduation of many a London undergraduate sorely handicapped by necessity and poverty.

I am, Sirs, yours faithfully,

Dec. 23rd, 1899. A LONDON UNDERGRADUATE

"IMPROPER ADVERTISEMENT."

To the Editors of THE LANCET.

SIRS,—My attention has been called to a letter published in your issue of Dec. 23rd headed "Improper Advertisement" suggesting that I have been guilty of unprofessional conduct in notifying my change of address. To this statement I give the most unqualified contradiction. I sent cards to medical colleagues with whom I am acquainted, personal friends, patients, people to whom I had letters of introduction and at whose houses I have dined, clubs, medical societies, and papers to which I subscribe—in all 47 cards. I ordered 100 cards, of which 53 are unused and still in my possession. I have to request you to publish this letter in your next issue and to send me the name and address of your correspondent who has caused you to circulate this libel upon me.

I am, Sirs, yours faithfully,

Harley-street, Dec. 26th, 1899. KARL FÜRTH.

INCOME TAX REPAYMENTS.

THE Income TAX Adjustment Agency, 12 and 13, Poultry, London, E.C., write as follows:—

> As most of your readers who are engaged in business are now ascertaining the amount of their profits for the year 1899, will you allow us to remind them that, if such profits show a diminution, they may be entitled to the repayment of a considerable portion of the income tax paid in respect of the same? Many submit to overcharges, having failed on previous occasions to get their assessments reduced. In most cases the reason why they have failed is that they have not furnished proper accounts, while many have neglected to keep any accounts of their business transactions.

The Agency offers to advise persons gratuitously whether they can make a claim for repayment if full particulars of their incomes and a stamped addressed envelope are sent to them.

"THE ANGLO-AMERICAN INSURANCE COMPANY."

To the Editors of THE LANCET.

SIRS,—Your correspondent on this subject in THE LANCET of Dec. 23rd refers to a further company which is being promoted "under another name and upon somewhat similar lines" as the Anglo-American, and no doubt the scope and objects of this new company will be set before many practitioners in the same plausible terms, for it is fathered by most of those who were so recently promoting the Anglo-American, the victims of which are to be admitted to the prospective benefits of the new company provided they first part with further instalments. Probably the first set of dupes will think twice before yielding to the persuasions of anyone who was associated with such a loosely managed project as the defunct Anglo-American without being well assured of the character of this new undertaking.

I am, Sirs, yours faithfully,

Dec. 23rd, 1899. CAUTION.

*** As our readers may know, the alleged advance agent of this "Anglo-American Insurance Company," to whose actions we drew attention, has now been arrested.—ED. L.

"THE MACKEY FUND."

To the Editors of THE LANCET.

SIRS,—I have received the following subscriptions on behalf of the widow of the late Mr. Stephen Mackey:—Amount previously reported, £6 6s.; Dr. T. Lauder Brunton, £1 1s.; Mr. J. B. Winter, Brighton, £1; Inspector-General R. Dane, A.M.D., C.B., Southampton, £2.

I am, Sirs, yours faithfully,

LEONARD DOBSON, M.D. Lond.

59, Addison-gardens, Kensington, Dec. 27th, 1899.

Confidential.—We cannot interfere, at any rate at this stage. Our correspondent should draw up his list of proposed reforms and send them to the chairman, and he will make his position much stronger if he only advocates changes which he knows the funds of the institution can meet and if he suppresses all allusion to personal affronts.

A. B.—Moos-pappe is an absorbent material consisting of a variety of moss. It has been used in surgery and our correspondent would find probably that any purveyor of surgical dressings would supply him with it.

Doubtful (1) should not enter into any negotiations leading to partnership. There would be no objection to outright purchase of the *whole* practice.

Doubtful (2).—There can be no harm in the proceedings as the name and address are not published.

Upton Park.—Such cards should not be left wholesale on the public.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *East Anglian Daily Times, Leicester Daily Post, Kentish Observer, Liverpool Daily Post, Leeds Mercury, Dublin Daily Nation, Norfolk Daily Standard, South Wales Daily News, Wigan Observer, East Daily Press, Scotsman, Citizen, Darlington*

Echo, Manchester Guardian, Builder, Architect, Times of India, Pioneer Mail, Birmingham Daily Gazette, Birkenhead News, Blackpool Times, Yorkshire Post, Bristol Mercury, Guernsey Advertiser, Kidderminster Sun, Brighton Gazette, Sanitary Record, City Press, Mining Journal, Reading Mercury, Washington Post, Midlothian Journal, Warwick Advertiser, Oswestry Advertiser, Morning Herald, Local Government Chronicle, Australasian Medical Gazette, Public Health, Wigan Examiner, Alford, Spilsbury, and Horncastle Gazette, Hertfordshire Mercury, Surrey Advertiser, Court Circular, Mining Journal, Highland News (Inverness), Staffordshire Advertiser, Coventry Standard, Local Government Journal, &c., &c.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 28th, 1899.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 22	30·23	S.E.	...	39	39	34	35	36	Raining
" 23	30·03	E.	0·06	48	44	36	38	39	Foggy
" 24	30·05	S.W.	0·03	52	46	36	43	44	Cloudy
" 25	29·90	W.	0·05	57	45	39	39	40	Cloudy
" 26	29·67	S.W.	0·02	48	44	36	39	40	Cloudy
" 27	29·44	N.E.	0·05	38	35	31	Fzn.	32	Cloudy
" 28	29·45	S.E.	...	40	40	27	Fzn.	35	Foggy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.) Cancer (2 P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College 2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (6th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (3rd).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Eden, Dr. Macnaughton-Jones, Dr. J. Phillips, and others. Paper: Dr. H. Spencer: Four Cases of Rupture of the Uterus successfully treated by Packing the Tear *per vaginam* with Iodoform Gauze.

THURSDAY (4th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road).—8.30 P.M. Clinical Evening.

FRIDAY (5th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith, W.).—8.30 P.M. Papers: Mr. L. A. Bidwell: The Surgical Treatment of Dilated Stomach.—Mr. P. Dunn: Purulent Ophthalmia.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—4.30 P.M. Annual General Meeting. Lantern Demonstrations of Normal and Pathological Preparations of the Nose and Throat will be given by Dr. W. Williams and Dr. J. Horne. Cases will be shown by Sir F. Semon, Mr. W. Spencer, Dr. F. Powell, Dr. H. Tilley, Mr. L. A. Lawrence, Mr. S. Paget, Mr. Lake, and others. 8 P.M. Annual Dinner at the Café Royal, Regent-street, the President (Dr. F. de Havilland Hall) in the chair.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1899 which is completed with the issue of to-day, will be given in the next number of THE LANCET.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1899 will be ready shortly. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are now ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanie by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them. Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 15 3	Six Months	0 17 4
Three Months	0 7 8	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

Communications, Letters, &c., have been received from—

A.—Dr. L. N. Ashworth, Aramac, Australia; Ashton-under-Lyne District Infirmary, Secretary of; Dr. J. Anderson, Pitlochry; Aberystwith Infirmary, Secretary of; Messrs. Allen and Hanburys, Lond.; Apollinaris Co., Lond.

B.—Dr. C. Broyer, Melbourne; Dr. L. H. Bennett, Paignton; Mr. W. Bates, Lond.; Mr. J. Berry, Lond.; Mr. A. Benthall, Lond.; Mr. H. Brown, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. S. H. Benson, Lond.; Mr. H. Berdoe, Lond.; Mr. L. W. Bickle, Adelaide; Mr. A. B. Blair, Banwell; Mr. G. Brown, Lond.; Bradford Children's Hospital, Secretary of.

C.—Mr. W. F. Clay, Edinburgh; Messrs. Comar et Fils, Paris; Dr. O. H. Chapman, Grimsby; Cereals Co., Greenock; The Coppice, Nottingham; Messrs. A. H. Cox and Co., Brighton; County of Sutherland, Clerk of; Messrs. T. Christy and Co., Lond.; Mr. Culleton, Lond.; Messrs. J. and A. Churchill, Lond.; Dr. S. Crawshaw, Ashton-under-Lyne; *Charity Record and Hospital Times*, Editor of; Mr. W. H. Crosse, Lond.; Dr. L. Cobbett, Cambridge.

D.—Mr. L. B. Dhargalker, Bombay; Messrs. Down Bros., Lond.; Dorset County Hospital, Dorchester, Secretary of; Mr. Alexander Duke, Cheltenham; Mr. Davies-Colley, Lond.; Messrs. Duncan, Flockhart, and Co., Edinburgh.

E.—Captain H. M. Earle, I.M.S., Calcutta.

G.—Mr. O. W. Goss, Laconia, U.S.A.; Dr. A. Gad, Lond.; Gramophone Co., Lond.; General Medical Council, Lond.; Mr. J. Good, Stockport; Surgeon W. H. O. Garde, R.N., Mediterranean Station.

H.—Mr. A. Haviland, Frimley Green; Professor Hobday, Lond.; Dr. Halley, Dundee; H. G.

I.—Income Tax Adjustment Agency, Lond.

J.—Messrs. Jones and Son, Colchester; Mr. J. A. Jones, Port Talbot.

K.—Messrs. Kilner Bros., Lond.

L.—Livingstone Exhibition, Secretary of; Dr. L.; Mr. T. Lewis, Birmingham; Messrs. Leathwaite and Simmons, Lond.; London Press Exchange, Lond.

M.—Mr. O. StJ. Moses, Edinburgh; Mr. A. B. MacDowall, Boscombe; Mr. S. K. Mukerji, Partabgarh, India; *Medical Magazine*, Lond.; Mr. D. Morganwg, Cardiff; Dr H. C. Major, Bingley; Messrs. J. Maythorn and Son, Biggleswade.

N.—Mr. J. Neal, Birmingham; Mr. Newland Pedley, Lond.; North Riding Infirmary, Middlesbrough, Secretary of; Mr. H. Needes, Lond.

O.—Dr. W. Overend, Clacton-on-Sea.

P.—Mr. P. Pope, Lond.; Messrs. Parke, Davis, and Co., Lond.; Parish of St. Mary Islington, Clerk of; Messrs. Potter and Sacker, Lond.

R.—Mr. R. Reynolds, Steeple-Bumpstead; Royal Isle of Wight Infirmary, Secretary of; Radcliffe Infirmary, Oxford, Secretary of; Mr. T. S. Robson, Templecombe; Rebman, Ltd., Lond.; Messrs. A. Riddle and Co., Lond.; Dr. R. R. Rentoul, Liverpool.

S.—Mr. A. M. Sheild, Lond.; Messrs. Street and Co., Lond.; Society of Apothecaries, Lond., Secretary of; Société Mutuelle de Publicité, Paris; Messrs. Squire and Sons, Lond.; Sell's Advertising Agency, Lond.

T.—Mr. W. J. Tilley, Warwick, Australia; Mr. W. R. Tarbet, Bewdley.

U.—University College Hospital, Secretary of; University of London, Registrar of; Upton Park.

W.—Mr. M. Ward, Twickenham; Mr. H. S. Webb, Welwyn; Messrs. Wright, Dain, Peyton, and Co., Birmingham; Miss N. L. Woodward, Lond.

X.—X. Y. Z., Llandilo.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. R. Armstrong, Treorchy; A. C.; Association for Pure Vaccine Lymph, Lond.; A. B. R.; Messrs. Ayrton and Saunders, Liverpool; Mr. W. F. Abbott, Addlestone; A. H.; *Advertiser*, Pontefract.

B.—Dr. D. H. Baria, Dhrangadhra, India; Dr. C. Bage, South Yarra, Australia; Mr. E. H. Beaman, Misterton.

C.—Mr. A. M. Cato, Lond.; Co-öperative Advertisers, Lond.; Messrs. Cox, Leicester; Mr. W. Cattell, Holytown; C. W. H.; Dr. T. F. Chavasse, Birmingham; Mr. J. H. Cropper, Bacup; Mr. F. H. Cane, Upper Edmonton; City and County of Bristol, Clerk of.

D.—Mr. T. Dixon, Lond.; Messrs. Derry and Sons, Nottingham; Messrs. Dodsworth and Fountain, Chiswick.

E.—E. H.

F.—Mr. J. J. Fanning, Long Eaton; F. W. B.; F. W.

G.—Dr. G. A. Gibson, Edinburgh; Messrs. E. Gould and Son, Lond.; Mr. W. Gimber, Lond.; Mr. G. H. Gemmell, Edinburgh; Goswell-road (329)

H.—Mr. J. Heywood, Manchester; Mr. T. Homer, Kirkbride; Mr. H. Hartley, Dublin; Surgeon W. E. Home, R.N., Hong-Kong; Messrs. Hill and Hoggan, Glasgow; Hospital for the Insane, Goodna, Australia, Medical Superintendent of; H. B.

J.—Mr. J. E. Jones, New Quay; Jenner Institute for Calf Lymph, Lond.

K.—Mr. B. L. Kalra, Poonch, India.

L.—L. W.; *La Semaine Médicale*, Paris; Mr. J. Lloyd, Llwyntudor, Rhulen.

M.—Mr. W. A. Mushé, Lond.; Mr. J. R. Meadowcroft, Lond.; Dr. J. F. Macara, Durness; W. S. Merrell Chemical Co., Lond.; Medicus, Manchester; M. P. H., Lond.; M. S. McD.; Messrs. E. MacGeorge and Co., Lond.; Dr. W. McCallin, Coleraine; Male Nurses' Coöperation, Great Marlborough-street, Secretary of; Medicus, Wrexham.

N.—Northern Medical Association, Glasgow; National Dental Hospital, Lond., Secretary of.

O.—Dr. C. Ormerod, Lipheok; Oxford Eye Hospital, Secretary of.

P.—P. B.

R.—Royal Ear Hospital, Soho; Risbridge Union, Haverhill; Mr. J. A. Reynolds, Todwick.

S.—Mr. D. Samuel, Llanelly; St. Marylebone General Dispensary, Secretary of; S. F. S.; *St Neots Advertiser*; Mr. J. Spencer, Ellesmere; S. L.; Sheffield Royal Infirmary.

T.—T. H.; T. B.

V.—Messrs. C. Vaux and Sons, Sunderland; Victoria Infirmary, Glasgow, Secretary of.

W.—Dr. F. J. Webb, Gorton; Mr. R. T. Williams, Port Talbot; West Bromwich District Hospital, Secretary of; Dr. J. G. Williamson, Southend; Westminster General Dispensary, Secretary of; W. T.; W. J. B.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 8	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

NEW ASEPTIC INSTRUMENT CABINETS

(REGISTERED).

Price

18 × 15 × 8 ins.

With 2 Plate Glass Shelves

£1 15s. 0d.

Aseptic Enamelled Iron Stand for above, 15/-.

LONDON MANUFACTURE.

Price

24 × 18 × 11 ins.

With 2 Plate Glass Shelves

£2 15s. 0d.

Aseptic Enamelled Iron Stand for above, 17/6.

LONDON MANUFACTURE.

EXTRACT FROM THE LANCET, March 5th, 1898:—"Messrs. ARNOLD & SONS, of West Smithfield, inform us that they have constructed a cabinet for the storing of surgical appliances at a price that will place it within the reach of every general practitioner. It is made of iron enamelled white, with ¼-in. polished plate glass top, back, sides, and door, with two plate-glass shelves with polished edges, and is manufactured in two sizes—18 × 15 × 8 in., 35s.; and 24 × 18 × 11 in., 55s. The Cabinet should prove useful to many institutions and practitioners."

THE PHONOPHORE

(AN IMPROVED STETHOSCOPE.)

Patented.

FIG. 1.

FIG. 2.

FIG. 3.

UNSOLICITED TESTIMONIALS.

"DEAR SIRS,—I beg to thank you for the best Stethoscope I have ever used, and during the last forty years I have used a good many.—Yours faithfully, W. M. D."

"Cumberland.

"GENTLEMEN,—I am exceedingly pleased with the Phonophore. It is the best form of Stethoscope I have ever used, and deserves a big sale.—Yours faithfully, J. B."

"Bournemouth.

"DEAR SIRS,—Your Phonophore is a very ingenious Stethoscope; it has wonderful sound-conducting qualities.—Yours faithfully, W. F. C."

"Machynlleth.

"GENTLEMEN,—I am extremely pleased with the Phonophore, it was exactly what I required. Thanking you for your very prompt attention —Yours truly, W. R. W."

"Northampton.

"DEAR SIRS,—I received the Phonophores safely, and am much pleased with them."—Yours truly, J. B. H."

"Merthyr Vale.

"GENTLEMEN,—Your Phonophore-Stethoscope received is very factory.—Yours faithfully, D. K. D."

PHONOPHORE (Single) with metal stem, nickel-plated, vulcanite ear-piece, and india-rubber cap fitted to chest-piece, complete (Fig. 1)	£0	5 6
Do. Binaural, with india-rubber ear-pieces and cap fitted to chest-piece, complete (Fig. 2)	0	12 6
Do. with flexible india-rubber tube, ear-piece, and plated mount, complete (Fig. 3)	0	6 6
Do. Chest-piece only, for attaching to Binaural Stethoscope	0	5 6

ARNOLD & SONS, Surgical Instrument Manufacturers,

By Appointment to Her Majesty's Government; the Honourable Council of India; The Admiralty; The Crown Agents for the Colonies; Her Majesty's Prisons; Foreign Governments; Royal Chelsea Hospital; St. Bartholomew's Hospital; and the principal Provincial and Colonial Hospitals, &c.

26, 30, & 31, WEST SMITHFIELD, and 1, 2, & 3, GILTSPUR STREET, LONDON, E.C. (Opposite St. Bartholomew's Hospital.)

Telegraphic Address: "INSTRUMENTS, LONDON." ESTABLISHED 1819. Telephone No. 518 (Holborn.)

CHINOSOL A POWERFUL GERMICIDE

Is non-poisonous, non-corrosive, non-volatile, very portable, and does not stain.

The use of **Chinosol** in the form of **Pure Powder** and **Compressed** (8 and 15 grains) **Tablets,** as well as of a great number of valuable **Chinosol Preparations** for **internal** and **external** application is considerably increasing amongst the **MEDICAL** and **SURGICAL PROFESSION** of this Country.

Crude Chinosol in various handy forms for a **prompt** and **reliable DISINFECTION** and **DEODORISATION** is now employed by **H.M. Office of Works, the Metropolitan and County Asylums Board,** Fever and General Hospitals, Infirmaries, Vestries, Sanitary Authorities, &c.

Chinosol was awarded a **Prize Medal** at the Sanitary Congress in
LEEDS, 1897; BIRMINGHAM, 1898; SOUTHAMPTON, 1899.

IODOFORMOGEN.

An Odourless Preparation of Iodoform.
Iodoformogen is a preparation of **Iodoform** in combination with **Albumen**, the Iodoform being so closely bound up with the Albumen that it can only be separated out by such means as would gradually dissolve the Iodoform.

Iodoformogen occurs in an extremely fine powder, which is non-hygroscopic and does not cake like Iodoform. For these reasons it is a most valuable Dusting Powder for Wounds. The chief advantage consists in its almost entire absence of smell, so that, in cases of large wound surfaces dressed with this product, the disagreeable odour of Iodoform is scarcely noticeable. **Iodoformogen** is capable of sterilization at 100 Centigrade.

Dr. E. Kromayer, Lecturer of Dermatology, Halle a/s, reports as follows:—"In comparing Iodoformogen with Iodoform, **I should give the preference to Iodoformogen,** quite apart from its having no smell. It seems to act more discreetly, more slowly, but more surely and permanently. My own experience up to the present time leads me to consider Iodoformogen to be the best dusting powder for wounds now existing."

PAPAÏN-FINKLER.

This ideal purely vegetable digestive ferment is largely used in the curative treatment of Gastric Ulcer (THE LANCET, Feb. 9th, 1895, p. 333), and as an aid to the **nutrition of patients suffering from Phthisis,** its value cannot be overrated (see THE LANCET, April 27th, 1895, page 1050). The solvent action of Papain on albuminous bodies is also turned to account in Diphtheria. Under the application of a 5 per cent. aqueous mixture the false membranes promptly disappear, leaving the mucous membrane accessible to the action of suitable antiseptics. The importance of this effectual local treatment is in no wise diminished by the constitutional effects of the Antitoxin treatment. Papain is further indicated in all forms of dyspepsia, its action being fully maintained in acid, alkaline, and neutral medium, exhibiting at the same time a tonic and antiseptic effect.

Colchi-Sal

Colchicine (Methyl) Salicylate.

CAPSULES.

For all GOUTY and RHEUMATIC Manifestations.

Write for Literature and Samples.

Above Preparations are Sold by all Wholesale and Retail Chemists; where not promptly obtainable please apply direct to

B. KÜHN, 36, St. Mary-at-Hill, LONDON.

Chinosol Trade Mark.

Tel. Address: CARMINES, LONDON. Telephone, AVENUE No. 3975.

SAMPLES, FULL LITERATURE, & PRICE LIST SENT FREE to the MEDICAL PROFESSION.

Trade Mark.

NEW REMEDIES—ECTHOL.

By Dr. P. L. LECTOURE.

"A great deal is being heard in the American medical world at present of a new remedy called 'ECTHOL.'

"This is not at all one of those countless substances which the chemist brings daily to light, which are tried according to more or less theoretical ideas, and which pass from our view like meteors.

"ECTHOL is composed of the essential principles of two plants, whose therapeutic properties, although discovered empirically, are none the less solidly established. It is a reliable remedy that has stood its tests, and that will remain in the Pharmacopœia.

"The two plants whose active principles are contained in ECTHOL are the *Thuya* and the *Echinacea*.

"The anti-purulent properties of Thuya have been demonstrated for too long a period for it to be necessary to dwell on this point; and we will only say that Dr. J. R. Leaning, in his studies on cancerous disorders, has again shown that Tincture of Thuya dries up the suppuration and hastens recovery.

"While it is useless to lose time speaking of the action of Thuya, this is no longer the case as regards Echinacea, whose therapeutic acquisition dates from yesterday.

"The *Echinacea angustifolia* is a plant that grows in North America, in the Eastern States, beginning with Pennsylvania. It was introduced into the medical profession by Dr. Meyer, who demonstrated its usefulness to Prof. John King. The former physician, enchanted with the powerful effect of Echinacea in toxæmia, looked on it as a universal panacea.

"We can say that further experience with this remedy has to a certain extent borne out Meyer's almost incredible assertions.

"At the present time Echinacea renders the greatest service in infectious disorders, suppuration, septic wounds, insect and snake bites, cutaneous disorders with infection, chronic mucous catarrh, &c.; and these assertions are based on the publications of Goss, Parker, Hayes, Webster, Shelley, King, Snyder, Farnum, Russell, Ellingwood, and Felter.

"This rapid sketch of the properties of Echinacea is enough to show how similar they are to those of Thuya, while at the same time its action is more intense and of a wider application. For this reason intelligent therapeutists were naturally led to try and combine the active principles of Thuya and Echinacea. Messrs. Battle & Co. have succeeded in this attempt, and have given the name of 'ECTHOL' to this new product.

"Dr. VILLARD H. MOOR has expressed his opinion of the value of this new product in the following terms: 'ECTHOL represents and contains the active principles of Thuya and Echinacea. Thuya requires an adjuvant. Combined with Echinacea it loses none of its properties, which are in no wise modified, but, on the contrary, rather enhanced. Finally, Echinacea gives to Thuya a reliability of action that no extract or tincture possesses.'

"We shall only add one word. ECTHOL is the most powerful anti-purulent or anti-suppurative remedy at present known—which has been proved by facts as numerous as convincing."

(Bulletin Général de Thérapeutique, Paris, July 8th, 1899.)

PRICE—12-oz. Bottle, 4s. 6d.

The usual discount to Medical Men requiring it for their own use or for Dispensing.

BATTLE & CO., St. Louis.

ENERAL DEPOT FOR GREAT BRITAIN—

ROBERTS & CO., 76, New Bond Street, London, W.

HOMMEL'S HÆMATOGEN

(English Patent No. 12,504).

Purified and Concentrated HÆMOGLOBIN flavoured with Chemically Pure GLYCERINE and MALAGA WINE, in the proportion of Four Ounces of Glycerine and Two Ounces of Wine in each Pint.

HOMMEL'S HÆMATOGEN contains (1) perfectly pure Hæmoglobin, (2) the whole of the Salts which are found in Fresh Blood, and (3) the highly important Albuminous Constituents of the Serum of the Blood in a Concentrated and Purified form, neither Decomposed nor Predigested.

☞ **A MOST EFFICACIOUS REMEDY** ☜

in General Debility, Anæmia, Chlorosis, Neurasthenia, Rickets, Scrofula, Weak Heart, Wasting Diseases of Children, Chronic Catarrh of the Stomach and Bowels, Loss of Appetite, Convalescence after Influenza, and Fevers (including Typhoid Fever, &c.), and Over-rapid Growth in Young Persons.

A POWERFUL RESTORATIVE IN DISEASES OF THE LUNGS.

NEVER PRODUCES VASCULAR EXCITEMENT OR THROBBING OF THE TEMPLES (ORGASMUS).

UNSURPASSED AS A MEDICINE FOR CHILDREN.

Beware of Imitations of HOMMEL'S HÆMATOGEN which are offered to the public under names similar to that of the genuine preparation. Some of these imitations contain ether, and on that account are positively injurious to children and to nervous or sensitive patients.

SOME RECENT MEDICAL OPINIONS:—

"BIRMINGHAM.

"I am thoroughly convinced that in Hommel's Hæmatogen a potent and valuable therapeutic agency has been discovered, and it should be used in all cases of anæmia and certainly in all cases that resist the usual treatment."

A. B——, M.D., D.P.H. Camb.

"LANARK.

"I have pleasure in informing you that Hommel's Hæmatogen has given me great satisfaction in a case of anæmia with nervous debility in which I gave it. The results were remarkable in building up the system and giving strength to the patient."

S. H——,
L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg.

"CROWLE, DONCASTER.

"I tried the samples of Hommel's Hæmatogen in a case of phthisis, and found it very useful in checking night perspiration and increasing strength of patient."

A. A. H——,
L.R.C.P. Edin., L.R.C.S. Edin., and L.M.

"I have tried Hommel's Hæmatogen in a case of anæmia and in a case of convalescence after typhoid fever. Its action was simply surprising. The patients made remarkably good and quick recoveries, better in fact than I had ever seen under the use of strengthening medicines of that class. I do not hesitate to give your Hæmatogen the first place among Hæmoglobin preparations, and it is my intention in suitable cases to prescribe it only. It is truly a valuable remedy." DR. NEUMANN,
Specialist for Diseases of Children, Munich.

"The good effects of Hommel's Hæmatogen were very conspicuous in the case of an extremely anæmic woman, who, after taking it for eight weeks, could scarcely be recognised as the same person. I am quite convinced of the excellence of this remedy, and will always employ it in suitable cases." DR. JOSEPH WOHLGEMUTH,
Abtenau, Upper Austria.

"I have employed Hommel's Hæmatogen in several cases with the best results. In particular it answered admirably with anæmic children."

DR. BEUTHNER, Charlottenburg.

We shall be happy to forward SAMPLES and LITERATURE of HOMMEL'S HÆMATOGEN, Gratis and Carriage Paid, to Medical Practitioners who may wish to give it a trial.

KEPT IN STOCK BY ALL PHARMACEUTICAL CHEMISTS. SPECIAL PRICE TO THE PROFESSION.

DOSE.—For Young Infants: Half a Teaspoonful or One Teaspoonful twice a day in milk of the proper heat for drinking. For Children: One Tablespoonful, either pure or mixed with any convenient liquid. For Adults: One Tablespoonful twice a day before food, so as to secure the full benefit of its powerful appetising effect.

NICOLAY & CO., 36 & 36a, St. Andrew's Hill, London, E.C.

42

"GLY. MEDULL. OSS. RUB. ARMOUR"

Acts as a Stimulant to the Formative Processes and increases the production of Red Blood Corpuscles and Hæmoglobin, making it the ideal remedy in all Diseases due to Defective Hæmogenesis.

The best results follow the use of a preparation made with Marrow taken from the animal immediately after it is killed.

ARMOUR'S GLYCERINE EXTRACT OF RED BONE MARROW

Is made from absolutely Fresh Material, and contains the essential ingredients of raw Marrow.

When prescribing, it is respectfully requested that "GLY. MEDULL. OSS. RUB. ARMOUR" be specified.

Sold by all leading Wholesale Houses in Bottles of 4, 8, and 16 ounces.

BEEF JUICE. Armour's

Contains in a readily assimilable form all the valuable soluble properties of Prime Lean Beef.

To the Medical Profession ARMOUR'S BEEF JUICE appeals strongly, being of high value in all cases where both nourishment and stimulant are required. By analysis the percentage of albumen is equivalent to 45 per cent. of fluid white of egg; and the meat extractives, in addition to and without including peptones, propeptones, &c., amount to 9·54 per cent. Objectionable preservatives are absent. Being easy of assimilation, it is invaluable as a food in cases of

Fever, Influenza, Gastric Irritation, &c.

When there is physical or mental weakness producing extreme exhaustion, it supplies the necessary power to rebuild the system.

Packed in small Amber Bottles. Sold by leading Wholesale Houses and Retail Pharmacies at a most moderate price.

ARMOUR & COMPANY,

CHICAGO, U.S.A. LONDON, E.C.

PLASMON

NATURE'S NUTRIENT.

Soluble, Digestible, Natural Albumen.

Pure. Tasteless. Odourless. Nutritious. Cheap.

PLASMON is the only soluble Proteid or Albumen free from Chemicals—therefore highly digestible and safe.

PLASMON is the outcome of modern systematic research on proteids.

PLASMON is a highly concentrated milk proteid food of great merit.

PLASMON is a soluble, easily digested food, fully replacing meat diet.

PLASMON is an economical food within the reach of everyone. It may be used alone or with any and every form of food.

The process by which PLASMON is prepared is a mechanical one.

WHAT OTHERS SAY OF PLASMON.

(See opposite page).

BEWARE of Proteins or Albumens which are insoluble or which contain Chemicals. Such are indigestible and harmful.

For Particulars and Samples apply to

The PLASMON SYNDICATE, Ltd.,
56, Duke St., Grosvenor Square,
London W.

PRICE:

Packets about 1 lb.	2/6
,, ,, ½ lb.	1/4
,, ,, ¼ lb.	-/9

PLASMON

NATURE'S NUTRIENT.

Professor W. PRAUSNITZ, M.D., Principal of the Hygienic Institute, Graz University, and Principal of the State Department for Investigation of Food, said at the meeting of the German Scientific Association in Munich :—

"Plasmon possesses the highest assimilative value known for any albumen food."

In the MÜNCHENER MEDICINISCHE WOCHENSCHRIFT, 1899, No. 26, he states :—

"**There is no food preparation known to us equal to Plasmon,** either as regards constancy of composition, as guaranteed by its source, or in respect to the proportion, solubility, and digestibility of the nutritive constituents.'

Professor F. HOFMANN, M.D., Privy Medical Councillor and President of the Hygienic Institute, Leipsic University, says :—

"The Plasmon taken fully replaced the albumen of ordinary meat diet."

"Plasmon is an albumen preserve which contains in a minimum space the maximum quantity of indispensable food."

Dr. C. VIRCHOW, of Berlin. After a systematic trial of the nutrient value of Plasmon, including 19 days' experiment upon himself, Dr. VIRCHOW expresses himself as follows :—

"From my experience I can recommend the administration of Plasmon. Plasmon is an albumen preparation containing a very high proportion of nitrogen and extremely digestible. As practical trials have demonstrated, *it can replace all other animal albumen foods and is superior even to meat in nutrient value.* Plasmon, moreover, maintains the physical strength of workmen engaged in the most laborious tasks, and therefore at its low price it can be strongly recommended as of inestimable value in the kitchens of the working classes."

Dr. W. CASPARI, Physiological Institute of the German Board of Agriculture, says :—

"The dietetic experiments show that more flesh is put on when dieted with Plasmon than with meat food." (FORSCHRITTE DER MEDICIN, XVII., No. 19.)

Dr. I. B. RAVENS, Principal Medical Officer of the State Kropp Asylums for Imbecile Children and Foundlings, says :—

"Whoever sees the children and patients fed on Plasmon at once recognises from their appearance the wonderful success of its administration."

Dr. WOLFF-IMMERMANN, Director of the Reiboldsgrün Hospital in Saxony, says :—

"Even the most fastidious patient took it for weeks and months without objection."

"The influence of Plasmon was unmistakable; there was gradual improvement of the digestion, and increase of strength, and gain in weight."

A complete Pamphlet of Scientific Reports will be furnished on application, together with Free Samples, by

The PLASMON SYNDICATE, Ltd.,
56, Duke Street,
Grosvenor Square, W.

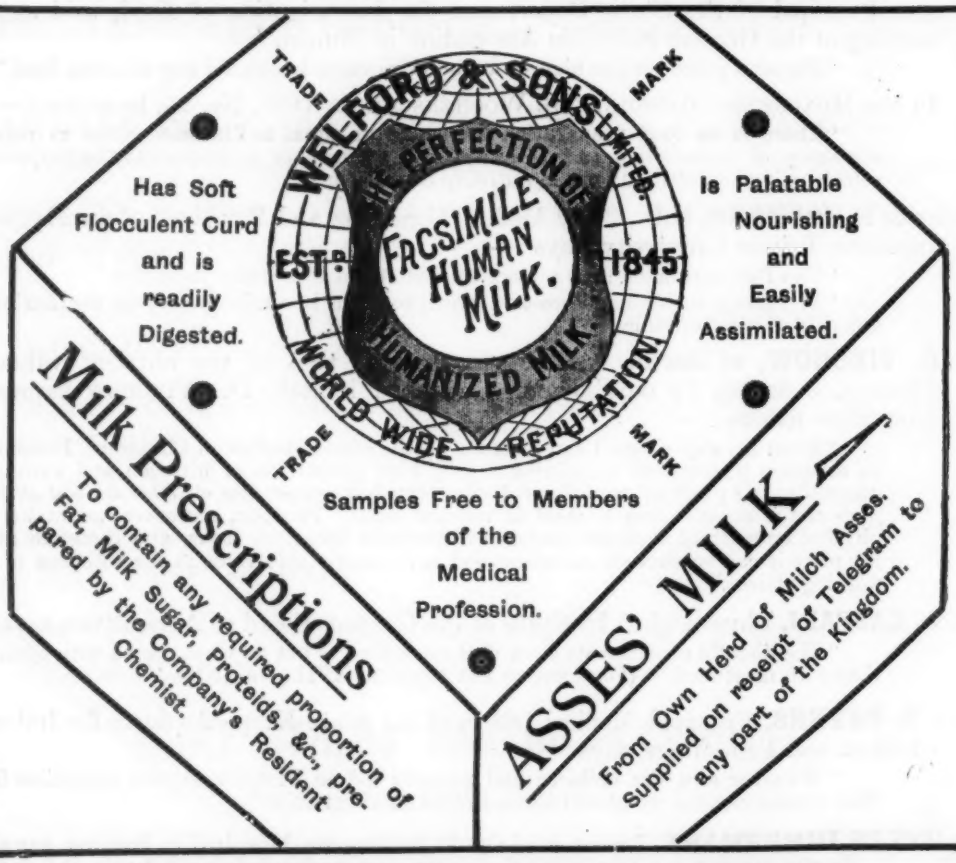
HUMANIZED MILK

BEST AND MOST RELIABLE,

Being prepared from Perfectly Fresh Milk, produced on the Company's Own Farms.

No. 1.—"FACSIMILE HUMAN MILK."
Prepared from Milk Constituents only.
Analogous to the Best Mother's Milk.

No. 2.—"MODIFIED HUMANIZED MILK."
With a minimum percentage of Casein.
For very young and delicate Infants.


TRADE MARK
WELFORD & SONS LIMITED.
THE PERFECTION OF
FACSIMILE HUMAN MILK.
EST.D 1845
HUMANIZED MILK.
WORLD WIDE REPUTATION
TRADE MARK
Has Soft Flocculent Curd and is readily Digested.
Is Palatable Nourishing and Easily Assimilated.
Samples Free to Members of the Medical Profession.
Milk Prescriptions
To contain any required proportion of Fat, Milk Sugar, Proteids, &c., prepared by the Company's Resident Chemist.
ASSES' MILK
From Own Herd of Milch Asses. Supplied on receipt of Telegram to any part of the Kingdom.

Full Particulars of Milk Preparations and Nursery Supplies on application to

WELFORD & SONS (DAIRY COMPY.) LTD.

Chief Dairy and Offices—
ELGIN AVENUE, MAIDA VALE, LONDON, W.

Telegraphic Address—"WELFORDS, LONDON." Telephone—No. 107 PADDINGTON.

UNIV. OF MICH.
JAN 10 1900

THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

TELEGRAPHIC ADDRESS—LANCET, LONDON [ONE HUNDRED & SIXTY-EIGHT PAGES.] TELEPHONE NUMBER—5356 GERRARD

No. XXVII. OF VOL. II., 1899. No. 3983. LONDON, SATURDAY, DECEMBER 30, 1899. PRICE 7d.; POST FREE, 7½d. [Pp. 120+48.

NOTICE.

THE MEDICAL DIRECTORY for 1900.—Owing to a fire at the printers, whereby much of the specially cast type was destroyed, this volume cannot be ready till early in February. J. & A. Churchill, London.

Now ready, Vol. XIX. (Session 1898-99). With 11 Plates and 17 Illustrations in the text. 8vo, 12s. 6d.

TRANSACTIONS of the OPHTHALMOLOGICAL SOCIETY of the UNITED KINGDOM. London: J. & A. Churchill, 7, Great Marlborough-street.

Now ready, with Skiagrams, 4to, 1s.

STEREOSCOPIC SKIAGRAPHY in DISEASES of the CHEST. By HUGH WALSHAM, M.D., M.R.C.P., Assistant Physician to the City of London Hospital for Diseases of the Chest.

London: J. & A. Churchill, 7, Great Marlborough-street.

Thirteenth Edition, revised, post 8vo, 10s. 6d.

HOBLYN'S DICTIONARY of MEDICAL TERMS.

Whittaker & Co., Paternoster-square, London, E.C.

SICK CHILDREN, GUIDE to the CLINICAL EXAMINATION and TREATMENT of. By JOHN THOMSON, M.D., F.R.C.P. Edin., Extra Physician to the Royal Hospital for Sick Children, Edinburgh. Crown 8vo, with 52 Illustrations, price 9s.

W. F. Clay, 18, Teviot-place, Edinburgh.

Second Edition, crown 8vo, cloth, with Illustrations, price 2s. 6d. net, by post 2s. 8d.

CONSTIPATION and its MODERN TREATMENT. By GEORGE HERSCHELL, M.D. Lond., Senior Physician to the National Hospital for Diseases of the Heart, Soho-square.

"This second edition is a thoroughly practical treatise."—BRIT. MED. JOURNAL. "His directions as to diet and drug treatment are full of common sense and experience."—PRACTITIONER. "The recommendations are of a thoroughly practical kind, and have a sound scientific basis."—GLAS. MED. JOURNAL.

Published by H. J. Glaisher, 57, Wigmore-street, W.

WORKS by Mr. HENRY MORRIS, M.A., M.B. Lond., F.R.C.S., Senior Surgeon to the Middlesex Hospital.

ON the ORIGIN AND PROGRESS OF RENAL SURGERY. With Special Reference to Stone in the Kidney and Ureter, and to the Surgical Treatment of Calculous Anuria. Being the Hunterian Lectures of 1898. Together with a Critical Examination of Subparietal Injuries of the Ureter. Just published, price 6s., with 28 Illustrations.

INJURIES and DISEASES of the GENITAL and URINARY ORGANS. With 97 Illustrations, price 21s.

SURGICAL DISEASES of the KIDNEY. Illustrated by Engravings and Chromo-Lithographs, price 9s.

THE ANATOMY of the JOINTS. With 44 Plates and Engravings, price (462 pp., 8vo) 16s. (J. & A. Churchill.)

Cassell & Co., Limited.

BY WILLIAM H. BENNETT, F.R.C.S., Surgeon to St. George's Hospital; Member of Court of Examiners, Royal College of Surgeons.

With 12 Illustrations, 8vo, price 3s. 6d.

VARIX: its Causes and Treatment, with Especial Reference to THROMBOSIS.

8vo, price 8s. 6d.

CLINICAL LECTURES on ABDOMINAL HERNIA, including the RADICAL CURE.

VARICOCELE. 8vo, price 5s.

With 3 Plates, 8vo, price 6s.

CLINICAL LECTURES on VARICOSE VEINS of the LOWER EXTREMITIES.

London: Longmans, Green & Co.

Also, price 2s. cloth.

ON APPENDICITIS. Two Clinical Lectures, reprinted from the CLINICAL JOURNAL. London: The Medical Publishing Co., Ltd.

SIGHT-TESTING for the GENERAL PRACTITIONER. Price 2s. 6d.; by post 2s. 7d. (to medical men only). A Manual by which he can rapidly learn to test the sight and prescribe spectacles. THE LANCET says: "It is correct, and will enable the practitioner to do what is claimed for it." THE MEDICAL TIMES says: "Recommended as being both practical and excellent." THE MEDICAL PRESS says: "Clearly and concisely arranged."—F. DAVIDSON, 140, Great Portland-street, London, W.

A New Volume begins with the January Number.
Subscription, One Guinea per annum (in advance), post free.
Single numbers, Two Shillings each.

EDINBURGH MEDICAL JOURNAL.
Edited by G. A. GIBSON, M.D., D.Sc., F.R.C.P.Ed.

CONTENTS FOR JANUARY:

SMITH, G. BELLINGHAM, M.B., B.S., F.R.C.S.—The Infectivity of Malignant Growths.
RAMSAY, A. MAITLAND, M.D., Ophthalmic Surgeon, Glasgow Royal Infirmary.—Purulent Ophthalmia.
TUKE, SIR JOHN BATTY, M.D., F.R.C.P.Ed., President.—Valedictory Address to the Medico-Chirurgical Society, Edinburgh.
DOUGLAS, CARSTAIRS C., M.D., B.Sc.Edin., Glasgow.—Some Observations on the Excretion of Uric Acid, with Special Reference to its connexion with Leucocytosis.
CROOM, J. HALLIDAY, M.D., F.R.C.P.Ed., President.—Valedictory Address to the Obstetrical Society, November, 1899.
WEBER, E. PARKES, M.D., F.R.C.P.—Note on Febrile Albuminuria, and the Question of a Special Rheumatic Albuminuria.
HIRSCH, CHARLES T. W., M.R.C.S., L.R.C.P., late District Medical Officer, Rewa.—Colonial Medical Service, Fiji.
Clinical Records.
Reviews of British and Foreign Literature.
Recent Advances in Medical Science.
Reports of the Medical Societies.
Analytical Reports.
Monthly Notes on Meteorology and Vital Statistics.

Young J. Pentland,
Edinburgh: 11, Teviot-place. London: 38, West Smithfield, E.C.

Now ready, demy 8vo, half bound, 17s. net.

DEFORMITIES: a Treatise on Orthopædic Surgery. By A. H. TUBBY, M.S.Lond., F.R.C.S.Eng. Illustrated by 15 Plates and 300 Figures.

BRITISH MEDICAL JOURNAL.—"Standard work on the subject in the English language."

Macmillan and Co., Ltd., London.

With 34 Illustrations. Price 7s. 6d. net.

NASAL OBSTRUCTION: the Diagnosis of the various Conditions causing it, and their Treatment. By Mr. W. J. WALSHAM, F.R.C.S., Surgeon to St. Bartholomew's Hospital.

"May be read with great profit and advantage by those specially interested in the surgery of the nose."—THE LANCET.
"The treatment is wise and trustworthy."—BRIT. MED. JOURNAL.
"As a work on diseases of the nose it is complete."—GLAS. MED. JOUR.
"Well written and evidently compiled as a result of considerable experience."—EDIN. MED. JOURNAL.

London: Baillière, Tindall, and Cox, King William-street, Strand.

ON MATERNAL SYPHILIS, including the Presence and Recognition of SYPHILITIC PELVIC DISEASE in WOMEN. By JOHN A. SHAW-MACKENZIE, M.D.Lond. With Coloured Plates and Wood Engravings, 8vo, 10s. 6d.

London: J. & A. Churchill, 7, Great Marlborough-street.

FIFTH Edition, revised, with Illustrations, crown 8vo, 10s. 6d.

THE DISEASES of WOMEN: a Practical Text-book. By ARTHUR H. N. LEWERS, M.D. Lond., Obstetric Physician to the London Hospital, &c. [*Lewis's Practical Series.*

"An excellent introduction to the study of gynæcology."—MED. CHRON.

London: H. K. Lewis, 136, Gower-street, W.C.

GOUT: its PATHOLOGY and TREATMENT. By ARTHUR P. LUFF, M.D., B.Sc. Lond., F.R.C.P. Price 5s.

Cassell and Company, Ltd., London, Paris, New York, and Melbourne

TALLERMAN'S HOT AIR TREATMENT.

NOTICE.

On the 24th June, 1899, an action was instituted in the High Court of Justice by Mr. Lewis A. Tallerman and the Patents and Manufacturers Development Company, Limited, against the Dowsing Radiant Heat Company, Limited, and on the hearing of such action in the Court of Appeal on the Dowsing Radiant Heat Company, Limited, undertaking not to print, publish, issue, or circulate any pamphlet, notice, circular, or advertisement which contained any press notice, testimonial, or other document or any extract therefrom originally written in favour of the plaintiffs' Hot Air Treatment, and agreeing to pay the plaintiffs £25 on account of their costs in the action, an order was made that all further proceedings in the action be stayed, and that the defendants, the Dowsing Radiant Heat Company, Limited, do pay to the plaintiffs, Lewis Abraham Tallerman and the Patents and Manufactures Development Company, Limited, the sum of £25 for their costs of the action.

Dated 23rd December, 1899.

ICHTHYOL.

SOLE MANUFACTURERS & PROPRIETORS—

THE ICHTHYOL COMPANY—CORDES HERMANNI & CO., HAMBURG.

IS EMPLOYED WITH ADVANTAGE IN

Diseases of Women. **Gonorrhœa.**
Diseases of the Eye.
Pulmonary Tuberculosis.
Deranged Conditions of the Digestive and Circulatory Organs.

Diseases of the Throat. **Influenza.**
Erysipelas. **Skin Affections.**
Inflammatory and Rheumatic Affections of all kinds.

ICHTHYOL Is warmly recommended by medical men, both connected with hospitals and in private practice, and is in regular use in University and Public Hospitals.

Its extensive employment is indicated by the **Reducing, Sedative,** and **Antiparasitic Properties** revealed by experimental and clinical observations, as well as by its **Stimulating** and **Regulating** effects upon the system.

ICHTHALBIN An Odourless and Tasteless Ichthyol-Albumen Powder. SPECIALLY PREPARED FOR INTERNAL ADMINISTRATION.

At all Chemists, price 2s. per box, containing 1 oz. *Dose: ½ to 1 teaspoonful, twice daily.*

Appetite-promoting; Nutrition-increasing; Stool-regulating effect; Disinfects the Intestine.

LITERATURE AND SAMPLES FREE TO MEMBERS OF THE MEDICAL PROFESSION ON APPLICATION TO

GUSTAV HERMANNI, Jun., 20, High Holborn, London, W.C.

IMMUNITY FROM INFECTION

By using TESTED GERMICIDES of GUARANTEED PERCENTAGE.

COOK'S "ANTISEPTIC" SOAP

(THOMSON'S PATENT). 3%, 1% ½%.

Finest Safeguard during period of DESQUAMATION. Invaluable in Midwifery Cases.

COOK'S 10% & 20% CARBOLIC SOAP.

EDWARD COOK & CO., Ltd., The Soap Specialists, London.

DIPLOMA for GOLD MEDAL, VICTORIAN ERA EXHIBITION, 1897. Also HIGHEST AWARDS, PARIS INDUSTRIAL EXHIBITION, 1895, CHICAGO EXHIBITION, 1893, for

THE O'CONNOR EXTENSION COMPANY'S PATENT APPLIANCES FOR THE LAME.

To enable those with Shortened Legs and Weak Ankles to Wear Ordinary Shoes and to Dispense with Unsightly Instruments.

ILLUSTRATED PAMPHLET FREE ON APPLICATION.

THE O'CONNOR EXTENSION COMPANY
2, Bloomsbury Street, Oxford Street, London, W.C.
INSPECTION INVITED.

THE LANCET.

No. 3983.] LONDON, SATURDAY, DECEMBER 30, 1899. [Pp. 120+48.

CONTENTS.

THE HARVEIAN LECTURES
(Abstract of) on the Treatment of Surgical Tuberculous Affections. Delivered before the Harveian Society of London by W. WATSON CHEYNE, F.R.C.S. Eng., F.R.S., Surgeon to King's College Hospital and Professor of Surgery at King's College.—Lecture III. (Delivered on Dec. 21st, 1899) ... 1793

AN INAUGURAL ADDRESS
on Our Position and Outlook. Delivered at Queen's College, Belfast, on Nov. 20th, 1899, by JAMES ALEXANDER LINDSAY, M.A., M.D.R.U.I., M.R.C.P.Lond., Professor of the Theory and Practice of Medicine at Queen's College, Belfast; Physician to the Royal Victoria Hospital, Belfast; and Consulting Physician to the Ulster Hospital, Belfast..... 1797

ORIGINAL ARTICLES.

Measures taken at Tor and Suez against Ships coming from the Red Sea and the Far East. By MARC ARMAND RUFFER, M.A., M.D.Oxon., President of the Sanitary, Maritime, and Quarantine Council of Egypt..... 1801

Some Notes on Sero-therapy. By H. W. MILLS, M.R.C.S. Eng., L.R.C.P.Lond..... 1808

Extensive Mediastinal Emphysema in a Fatal Case of Laryngeal Diphtheria; with Remarks on the Early and the Late Variety of Emphysema observed in the Case after Tracheotomy. By WM. EWART, M.D. Cantab., F.R.C.P.Lond., Senior Physician to St. George's Hospital and to the Belgrave Hospital for Children; and H. BUCKLEY RODERICK, M.B.Cantab., L.R.C.P.Lond., M.R.C.S.Eng., House Physician to St. George's Hospital..... 1808

Anatomical and Age Distribution of the Tineæ of Southern Assam. By S. ARTHUR POWELL, B.A., M.Ch. R.U.I..... 1809

A MIRROR OF HOSPITAL PRACTICE.

LONDON HOSPITAL:
Two Cases of Tumour of the Vagina. (Under the care of Dr. A. H. N. Lewers)..... 1810

ROYAL ALBERT EDWARD INFIRMARY, WIGAN:
A Case of Tuberculous Disease of the Right Knee and Right Epididymis; Death under Chloroform. (Under the Care of Mr. William Berry)..... 1811

MEDICAL SOCIETIES.

OPHTHALMOLOGICAL SOCIETY:
Exhibition of Cases 1811

ROYAL ACADEMY OF MEDICINE IN IRELAND:
Beri-beri.—Sarcoma of Lip ... 1812

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY:
The Duties of Medical Men in the Public Life of Health Resorts. — Sidmouth as a Winter Health Resort 1813

BRADFORD MEDICO-CHIRURGICAL SOCIETY:
Tuberculosis in its Relation to Public Health..... 1813

NEWCASTLE-ON-TYNE CLINICAL SOCIETY:
Exhibition of Cases and Specimens. — Prescribing from a Pharmacist's Standpoint 1814

EPIDEMIOLOGICAL SOCIETY:
The Behaviour of Plague at Oporto..... 1814

PATHOLOGICAL SOCIETY OF MANCHESTER:
Exhibition of Cases and Specimens..... 1815

BIRKENHEAD MEDICAL SOCIETY:
Music and Medicine considered from a Physiological, Pathological, and Therapeutical Standpoint 1815

KIDDERMINSTER MEDICAL SOCIETY:
Exhibition of Cases 1815

NORTHUMBERLAND & DURHAM MEDICAL SOCIETY:
Mitral and Tricuspid Incompetence 1816

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY:
The Treatment of Tetanus with Antitoxin 1816

GLASGOW SOUTHERN MEDICAL SOCIETY:
Exhibition of Cases 1816

WIGAN MEDICAL SOCIETY:
The Treatment of Typhoid Fever 1816

REVIEWS AND NOTICES OF BOOKS.

A Manual of Surgical Treatment. By W. Watson Cheyne, M.B. Edin., F.R.C.S. Eng., F.R.S., and F. F. Burghard, M.D., M.S. Lond., F.R.C.S. Eng..... 1816

Introduction to Physical Chemistry. By James Walker, D.Sc., Ph.D..... 1817

Lehmann's Medizinische Hand-Atlanten. Band XX. Atlas und Grundriss der Speciellen Pathologischen Histologie. Von Dr. Hermann Dürck ... 1817

Therapeutic Electricity and Practical Muscle Testing. By W. S. Hedley, M.D.Edin. ... 1818

Herbert Fry's Royal Guide to the London Charities (for 1900). Edited by John Lane 1818

THE ANNUS MEDICUS 1899.

Medicine 1819
Surgery 1820
Gynæcology and Obstetrics ... 1822
Pharmacology and Therapeutics 1824
Ophthalmology 1826
Forensic Medicine 1827
Dental Surgery and the Practice of Dentistry 1829
Biology and Physiology 1830
Anæsthetics 1832
Mirror of Hospital Practice ... 1834
The Naval and Military Medical Services 1834
Chemistry 1836
Public Health 1837
Vaccination in 1899 1838
The University of London 1839
The General Medical Council... 1840
The British Medical Association 1841
The Metropolitan Hospital Funds 1841
Sanitation in Ireland 1842
The Royal College of Physicians of London 1842
The Royal College of Surgeons of England 1842
The Benevolent Agencies of the Profession 1843
The Analytical and other Commissions of THE LANCET 1843
Quacks and Abortion: A Critical and Analytical Inquiry 1844
The Organisation of the Profession..... 1845
Honours to Medical Men..... 1846
Obituary 1847

ANNOTATIONS.

The Organisation of the Profession..... 1849
Local Outbreaks of Typhoid Fever in Lambeth 1849
A Question of Partnership 1850
Consulting Surgeons to the Forces in South Africa 1850
"Polymorphous Pleurisies" ... 1850
The Plague in Relation to Climate 1851
The Proteolytic Action of Pancreatic Juice 1851
The Diagnosis of Typhoid Fever 1851
The Workmen's Compensation Act 1852
A Constituent of Lyddite in Milk..... 1852

PUBLIC HEALTH AND POOR LAW.

LOCAL GOVERNMENT DEPARTMENT:
Reports of Medical Officers of Health..... 1855

SPECIAL ARTICLES.

Prince of Wales's Hospital Fund for London 1818
The War in South Africa.—(*Illustrated*) 1853
Asylum Reports 1856
The Services: Transvaal War Notes; Deaths in the Services 1856
The Public Health of Dublin: A Measles and Typhoid Epidemic 1859
Birmingham..... 1860
Manchester 1860
Scotland..... 1861
Paris 1861
Russia..... 1862
New York 1862
The Preservatives and Colouring Matters in Food 1860

CORRESPONDENCE.

Early *v.* Late Operation in Cases of Inflamed Appendix (Mr. James Berry).—(*Illustrated*)..... 1857
The Medical Defence Union and the London and Counties Medical Protection Society (Dr. Heron) 1858
Some Points in Life Assurance Examinations (Dr. Herbert Crosby) 1858
Dental Appointments at General Hospitals (Mr. Newland-Pedley) 1858
The late Dr. Francis J. A. Waring (Mr. T. Garrett Horder) 1859
American Insurance Societies.. 1869
The Final Examination for the Bachelor Degree in Medicine at London University: A Grumble..... 1869
The Organisation of the Profession: Suggestions Invited 1870
The Burden of the London Medical Student..... 1870
Improper Advertisment (Dr. Karl Fürth) 1870
The Anglo-American Insurance Company 1870
The Mackey Fund (Dr. L. Dobson) 1870

OBITUARY.

John Frederick Hodges, M.D. R.U.I., J.P. 1863
Richard Henry Meade, F.R.C.S. Eng., J.P. 1864
James Adams, M.D. Aberd., F.F.P.S.Glasg. 1864
Andrew Spearing, M.D.Glasg., M.R.C.S.Eng. 1865
Deaths of Eminent Foreign Medical Men..... 1865

MEDICAL NEWS.

Presentations to Medical Men.. 1818
Queen Victoria Convalescent Home, Bristol 1852
Pass-lists of the Universities of London and Cambridge, and Society of Apothecaries of London 1865
Foreign University Intelligence 1865
Practice in Brazil 1866
The Notification of Measles ... 1866
Duties of Workhouse Medical Officers 1865
Royal Victoria Homes for Inebriates, Bristol 1866
Soldiers' Convalescent Home, Bath..... 1866

Books, &c., received 1868
Appointments 1868
Vacancies 1869
Births, Marriages, and Deaths... 1869
Notes, Short Comments, and Answers to Correspondents... 1869
Medical Diary 1871

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

INDEX.

MEDICAL AND OTHER BOOKS AND PUBLICATIONS.

COVER.

PAGE

BAILLIERE, TINDALL, & COX:—
Walsham.... Nasal Obstruction i

CASSELL & CO.:—
Leff ..... Gout i
Morris ..... Origin and Progress of Renal Surgery i
" ..... Injuries &c. of the Genital and Urinary Organs i
" ..... Diseases of the Kidney.. i

CHURCHILL, J. & A.:—
Medical Directory for 1900 i
Morris ..... Anatomy of the Joints.. i
Shaw-Mackenzie. Maternal Syphilis i
Transactions of the Ophthalmological Society of the United Kingdom i
Walsham.... Stereoscopic Skiagraphy i

CLAY, W. F. (Edin):—
Thomson.... Examination &c. of Sick Children i

GLAISHER:—
Herschell.... Constipation i

LEWIS:—
Lewers..... Diseases of Women i

LONGMANS, GREEN & CO.:—
Bennett .... Varix i
" .... Clinical Lectures on Abdominal Hernia i
" .... Varicocele i
" .... Clinical Lectures on Varicose Veins i

MACMILLAN & CO.:—
Tubby ..... Deformities i

MEDICAL PUBLISHING CO.:—
Bennett .... Appendicitis i

PENTLAND, Y. J.:—
Edinburgh Medical Journal i

WHITTAKER & CO.:—
Hoblyn's Dictionary of Medical Terms i

MEDICAL LIBRARIES, &c. PAGE
Davidson—Sight-Testing for the O.P. i

BAILLIERE, TINDALL & COX:—
Allingham .. Colotomy &c. 10
" .. Diseases of the Rectum 10
Broadbent, Sir W. .... Heart Diseases 3
Browne .... Throat and Nose &c..... 10
Field ..... Diseases of the Ear 8
Dearmuid & Moor ..... Manual of Bacteriology 3
Rose & Carless .... Manual of Surgery 5
Stewart .... Manual of Physiology.. 5

BALE, SONS, & DANIELSSON:—
Treves ..... Peritonitis 8

BLACKWOOD & SONS:—
Stewart & Cuff ..... Practical Nursing 10

CASSELL & CO.:—
Marsh ..... Diseases of the Joints .. 10
Morris ..... Diseases of the Skin 10
" ..... Ringworm 10
Practitioner 9
Treves ..... Intestinal Obstruction.. 8

CHURCHILL, J. & A.:—
Beach ..... Treatment of Mentally Feeble Children 5
Bigg ..... Spinal Curvatures &c.... 10
" ..... Deformities of the Head and Neck 10
" ..... Manual of Orthopraxy.. 10
Butlin—
Smythe .. Ovariotomy 5
Charteris.... Practice of Medicine.... 5
Coles ..... The Blood 5
Cuff ..... Lectures on Medicine to Nurses 5
Callingworth Manual of Nursing 5
" Manual for Monthly Nurses 5
Domville.... Manual for Hospital Nurses &c. 5
Fenwick .... Tumours of the Bladder 5
" .... Urinary Diseases 5
" .... Electric Illumination of the Bladder &c..... 5

CHURCHILL—(Continued). PAGE
Fenwick & Burckhardt Electric Cystoscopy 5
Harley ..... Diseases of the Liver .. 6
Hartridge .. Refraction of the Eye .. 5
" .. The Ophthalmoscope .. 5
Hellier ..... Gynæcological Nursing 5
Langdon-Down .... Mental Affections of Childhood and Youth 5
Malcolm .... Physiology of Death from Traumatic Fever 5
Martin ..... Illustrated Ambulance Lectures 5
Partridge .. Ambulance Tablets 5
Richmond .. Antiseptic Principles for Nurses 5
Roberts .... Practice of Midwifery .. 5
" .... Handbook of Operative Gynæcology 5
Short Dictionary of Medical Terms .. 5
Swain ..... Surgical Emergencies .. 5
Treves & Lang..... German-English Dictionary 5
Wilson's Handbook of Hygiene 5

HAZELL, WATSON & VINEY:—
Smith's Physicians and Surgeons' Visiting List, 1900 8

KEGAN PAUL & CO.:—
Taylor ..... Diseases of the Eye 10

LEWIS:—
Moullin .... On the Prostate 9
" .... Inflam. of the Bladder.. 9

LONGMANS, GREEN & CO.:—
Althaus .... Failure of Brain Power 8
" .... Value of Electrical Treatment 8
" .... Impotency 8
Ashby & Wright .... Diseases of Children.... 7
Cheyne & Burghard.. Manual of Surgical Treatment 7
Dakin ..... Manual of Midwifery .. 7
Fowler & Godlee .... Diseases of the Lungs .. 7
Halliburton.. Essentials of Chemical Physiology 7

LONGMANS—(Continued). PAGE
Pick ..... Surgery 7
Schäfer..... Essentials of Histology 7
Stevenson .. Wounds in War 7
Transactions of the Clinical Society of London..... 10
Waller ..... Human Physiology 7

MACMILLAN & CO.:—
Treves ..... Perityphlitis &c. 8

PENTLAND, Y. J.:—
Lockwood .. Traumatic Infection.... 9
" .. Aseptic Surgery 9
" .. Cure of Hernia &c. 9

REBMAN:—
Abbott ..... Transmissible Diseases 9
Deaver..... Surgical Anatomy..... 9
Hall ..... Text-book of Physiology for Students and Practitioners 9
Keen ..... Surgical Complications and Sequels of Typhoid Fever 9
Krafft-Ebing. Psychopathia Sexualis.. 9
Kyle ..... Diseases of the Nose &c. 9
Vecki..... Pathology &c. of Sexual Impotence 9
Wharton .... Minor Surgery &c..... 9

REDDICK & CO.:—
Indian Medical Record..... 10

RENSHAW:—
Wood ..... Application of Trusses 10

SIMPKIN, MARSHALL, & CO.:—
Startin ..... Pharmacopœia of Dis. of the Skin 8

SMITH, ELDER, & CO.:—
Health Abroad 8
Tirard ..... Albuminuria &c..... 8

MEDICAL LIBRARIES &c.:—
Baker—Rare and Out-of-Print Books.. 10
Behnke—Stammering 10
General Practitioner 10
Medical Review 6

OFFICIAL AND GENERAL ANNOUNCEMENTS.

COVER.

OFFICIAL NOTICES:—
Tallerman Hot Air Treatment ..... i, iv

APPOINTMENTS VACANT:—
Aberystwith Infirmary 79
Belgrave Hospital for Children 79
Birmingham and Midland Eye Hos. .. 78
Bradford Children's Hospital 79
Central London Ophthalmic Hospital 79
City of London Hospital for Disease of the Chest 79
City of York 78
Coppice, Nottingham 78
County of Sutherland 79
District Infirmary, Ashton-under-Lyne 79
Hartley Wintney Union Infirmary .. 78
Hospital for Women, Soho-square ... 78
Leicester Infirmary 79
London Hospital 80
Middlesex Hospital 79
National Hos. for the Paralysed &c. 79
Parish of Gairloch, Ross-shire 78
Parish of St. Mary, Islington, Infirmary 79
Radcliffe Infirmary, Oxford 79
Royal Infirmary, Sheffield 79
St. John's Hos. for Skin Diseases 78
St. Marylebone General Dispensary .. 78
St. Mary's Children's Hospital 79
St. Thomas's Hospital Medical School 78
Three Counties Asylum, St. Neots 79

ASSISTANCIES, MEDICAL:—
Adams & Parkes, Adelphi 83
Chapman, Grimsby 83
Dodsworth & Fountain, Chiswick 83
Medicus, Manchester 83
Medicus, Wrexham 83
M. P. H., Stoke Newington-road..... 83
No. 1095, L.O., Strand 83
No. 1096, L.O., Strand 83
No. 1097, L.O., Strand 83
No. 1100, L.O., Strand 83
No. 1101, L.O., Strand 83
No. 1103, L.O., Strand 83
No. 1104, L.O., Strand 83
No. 1108, L.O., Strand 83
No. 1109, L.O., Strand 83
No. 1110, L.O., Strand 83
No. 1112, L.O., Strand 83
No. 1113, L.O., Strand 83
No. 1098, L.O., Strand 83
R. P., Clapham 83
Stocker, Ward 83

ASSISTANCIES—(Continued).
Williams, Edin. 83
Williams, Port Talbot 83
329, Goswell-road..... 83

ASYLUMS, HOMES &c.:—
Aberystwith, the Biarritz of Wales .. 77
Ashwood House, Kingswinford 77
Aston Hall, Warwickshire 76
Barnwood House Hospital 74
Bantingford House Retreat, Herts.... 76
Capel Lodge, near Folkestone 76
Clifton Grand Spa Hydro., Bristol 77
Coppice, The, Nottingham 74
Dalrymple House, Rickmansworth.... 77
Ellison Lodge, Herne Hill, &c. 77
Etheridge, Whitstable 76
Exeter Asylum..... 74
Flower House, Catford..... 78
Grove House, Church Stretton 74
Grove, The, Catton, Norwich 74
Haydock Lodge, Newton-le-Willows.. 76
High Shot House, Twickenham 77
Hitch, Mrs., Hollington 74
Hobson, Croydon..... 77
Hon. Sec., Bournemouth 76
Huguenots, The, Wandsworth 74
Kingswood-park, near Bristol 75
Lady Superintendent, Croydon..... 77
London Fever Hospital, Islington 77
Medical Superintendent, Brighton 74
M. E. G., L.O., Strand 76
Melbourne House, Leicester 74
Moat House, Tamworth 74
M. O. S., Bouverie-street..... 77
Northlands, Old Wandsworth 77
Northwoods House, Winterbourne.... 75
No. 445, L.O., Strand 76
No. 1111, L.O., Strand 76
Overend, Clacton-on-Sea 76
Shaftesbury House, Formby-by-the-Sea 77
Springfield House, Bedford 74
St. Andrew's Hospital, Northampton 74
St. Luke's Hospital, E.C. 74
Stocker, Lancaster-place 73
Stretton House, Church Stretton..... 74
Tower House, Leicester 74
Tower House, Westgate-on-Sea..... 76
Warneford Asylum, Oxford 74
Wells, Guy's Hospital 73
West Malling-place, Kent 75
Women's Temp. Home, Sydenham.... 74
Wonford House, Exeter 77
Wye House, Buxton 74
Wyke House, Isleworth 76
Yarrow Home, Broadstairs..... 75

BATHS:—
Smedley's, Matlock 78
Uringe Ice Baths 78

FINANCIAL &c.:—
Birkbeck Bank 71
Equitable Reversionary Interest Soc. 71

HOMES &c. WANTED:—
No. 1108, L.O., Strand 78

HOTELS:—
Cataract Hotel &c., Assouan 73
Mena House Hotel, Cairo 75
Montreux Hotel and Villa Belmont .. 73
Savoy Hotel, Assouan, Egypt 73
Tewfik Palace Hotel, near Cairo 73

HOUSE AND ESTATE AGENTS:—
Bedford & Co., Wigmore-street 80
Elliott, Son & Boyton, Vere-street 80

LIFE AND FIRE ASSURANCES:—
General Life Assurance Co. 78
National Provident Institution 78
Prudential 78

MEDICAL ACCOUNTANTS &c.:—
Morris 82
Turner 82

MEDICAL AGENTS:—
Adams & Parkes 82
Clinton's Medical Agency 80
Lee & Martin..... 82
Medical Agency 82
Needes, Herbert 80
Needes, J. C. 80
Northern Medical Association 82
Orridge 82
Peacock & Hadley 80
Scholastic, Clerical, & Med. Assoc.... 81
Turner 82
Wilson 82

MEDICAL SCHOOLS (London):—
Cooke's School of Anatomy 70
Jenner Institute of Preventive Med. .. 69
London School of Tropical Medicine.. 69
Medical Graduates' College, &c. 69

MEDICAL SCHOOLS (Provincial):—
Liverpool School of Tropical Medicine 69

NURSING INSTITUTES:—
All Saints Nurses' Co-operation 71
Baker-street Assoc. of Trained Nurses 72
General Lying-in Hospital, Lambeth 72
General Nursing Institution 71
Hamilton Association 72
Hos. for Sick Children, Gt. Ormond-st. 71
Leeds Trained Nurses' Institute 74

NURSING INST.—(Continued).
London Nurses' Association 71
Male and Female Nurses' Mutual Benefit Association..... 72
Male Nurses' Co-operation 72
Mental Nurses' Co-operation 72
Middlesex Hos. Trained Nurses' Inst. 71
Nurses' Co-operation, Portland-place 71
Queen Charlotte's Lying-in Hospital 71
Registered Nurses' Society..... 72
St. John's House 72
Temperance Male and Female Nurses' Co-operation 72
Temperance Male Nurses' & Masseurs' Co-operation 72

OFFICIAL NOTICES:—
Epsom College 70
Examination Hall 69
King's College, London..... 70
London Throat Hospital 70
Medical Department of the Navy 69
Middlesex Hospital Medical School .. 70
Naval Medical Examination 69
Royal London Ophthalmic Hospital .. 70
Royal Westminster Ophthalmic Hos. 70
St. Bartholomew's Hos. and College .. 70
St. John Ambulance Association..... 70
Surgical Aid Society 70

PARTNERSHIPS & PRACTICES:—
Adams & Parkes, Adelphi 83
No. 1048, L.O., Strand 83
No. 1093, L.O., Strand 83
No. 1099, L.O., Strand 83
No. 1101, L.O., Strand 83
No. 1105, L.O., Strand 83
No. 1107, L.O., Strand 83
Saunders, Catford 83

RAILWAY & STEAMSHIP CO.'S.:—
New Zealand Shipping Company..... 78
Royal Mail Steam Packet Company .. 78

SCHOOLS, PREPARATORY &c.:—
Albert Gate Riding Academy 70
Framlingham College, Suffolk 70
Scholastic, Clerical, and Med. Assoc.. 71

TUTORS AND LECTURERS:—
Cantab..... 71
Fellowships 71
Gemmell 71
H. B. 71
Jennings 71
Kerin..... 71
M.D. 71
Tutor..... 71
Univ Exam, Postal Inst..... 71
Van Praagh 71

(For Trade to Trade and Miscellaneous Advertisements see page i.)

The Most Popular Text-books of the Day.

This Day, THIRD EDITION, with Coloured Plate and numerous Engravings, price 12s. 6d. net.

HEART DISEASE:

WITH SPECIAL REFERENCE TO PROGNOSIS AND TREATMENT.

By SIR WM. H. BROADBENT, Bart., M.D., F.R.C.P.Lond., F.R.S.,

Physician Extraordinary to Her Majesty the Queen; Physician in Ordinary to H.R.H. the Prince of Wales; Consulting Physician to St. Mary's Hospital; and

JOHN F. H. BROADBENT, M.A., M.D.Oxon., M.R.C.P.Lond.,

Medical Registrar to St. Mary's Hospital.

"Plain, straightforward, and precise, which will render the book very acceptable to practitioners and students."—THE LANCET.

"Throughout the book the mind of the observant clinical physician is manifest."—BRIT. MED. JOUR.

NEW AND REVISED EDITION, with New Illustrations. Price 21s. net.

MANUAL OF SURGERY.

By WILLIAM ROSE, M.B., B.S. Lond., F.R.C.S.,

Professor of Clinical Surgery in King's College, London, and Senior Surgeon to King's College Hospital; and

ALBERT CARLESS, M.S. Lond., F.R.C.S.,

Surgeon to King's College Hospital, and Teacher of Operative Surgery in King's College.

"The more we examine this book the more we are inclined to pronounce it the best manual of surgery for all students."—THE LANCET.

"The book is thoroughly modern, and gives in succinct form, yet clearly and fully, the results of the best and most recent surgical work in this and other countries."—BRITISH MEDICAL JOURNAL.

THIRD EDITION, with Coloured Plates and Practical Exercises. Price 15s. net.

MANUAL OF PHYSIOLOGY.

By G. NEIL STEWART, M.A., M.D., D.Sc.,

Lately Examiner in Physiology, University of Aberdeen, and of the New Museums, Cambridge University; now Professor of Physiology, Western University, Cleveland.

"It will make its way by sheer force of merit, and *amply deserves to do so. It is one of the very best English text-books on the subject.*"—THE LANCET.

"Of the many text-books of physiology published, we do not know of one that so nearly comes up to the ideal as does Prof. Stewart's volume."—BRIT. MED. JOURN.

"The charm of Professor Stewart's book lies in its fascinating style. All the more intricate parts of physiology are discussed with such a pleasantness that one involuntarily goes on reading page after page."—CLINICAL JOURNAL.

SECOND EDITION, revised, with 81 Illustrations in Colours. Price 12s. 6d. net.

MANUAL OF BACTERIOLOGY:

CONTAINING THE LATEST METHODS OF RESEARCH AND THEIR APPLICATION. THE MOST PRACTICAL WORK AT PRESENT BEFORE THE SCIENTIFIC WORLD.

By T. H. PEARMAIN, & C. G. MOOR, M.A.Cantab., F.C.S., F.I.C.,

Formerly Demonstrator in the State Medicine Laboratories, King's College, now Public Analyst to the City of Exeter.

"The work is clearly written, and the processes described lucidly and distinctly. Altogether it is probably the most practical and useful work which has appeared during recent years."—JOURNAL OF STATE MEDICINE.

"When the first edition of Messrs. Pearmain and Moor's Applied Bacteriology made its appearance, we predicted that it would have a ready sale amongst those interested in the practical application of bacteriology."—BRIT. MED. JOUR.

London: BAILLIÈRE, TINDALL & COX, 20-21, King William Street, Strand.

INDEX—(CONTINUED).

TRADE AND MISCELLANEOUS ADVERTISEMENTS.

COVER.

PAGE

CHEMISTS AND DRUGGISTS:—
Ichthyol Co.—
Ichthyol ... 11
Ichthalbin ... 11

FOODS:—
Blatchley's Diabetic Preparations ... 111
Clay, Pagee & Co.—
Paget's Milk Food ... 111
Fry's Pure Concentrated Cocoa ... 111
" Malted Cocoa ... 111
Van Abbott & Sons—Gluten Flour ... 111

MED. AND SURG. APPLIANCES:—
Perfect Automatic Hot Appliance ... 111

SANITARY APPLIANCES &c.:—
Cook & Co.—
Antiseptic Soap ... 11
Carbolic Soap ... 11

TAILORS, BOOTMAKERS &c.:—
O'Connor—Patent Extension ... 11

BOTTLE MERCHANTS:—
Isaacs ... 11
Islington Glass Bottle Company ... 11
Kilner Brothers ... 11

CARRIAGES, HORSES &c.:—
Albert Gate Riding Academy—
Job Horses ... 13
Aldridge's Horse Repository ... 13
Davis & Co.—Harness &c. ... 13
Enstgate—Triano Single Brougham ... 13
Imperial Accident Co.—
Horse and Cattle Insurance ... 13
Maythorn & Son—
Medical Coupé ... 13
Duchess Car ... 13
Dog Cart de Luxe ... 13
97, George-street, Portman-square—
Miniature Single Brougham ... 13

CHEMISTS AND DRUGGISTS:—
Allen & Hanburys—
Allenburys Throat Pastilles ... 27
Hynol ... 29
Angier Chemical Co., Ltd.—
Petroleum Emulsion ... 22
Bayer Co., Ltd.—
Salophen ... 24
Aspirin ... 24
Hervin ... 24
Protargol ... 24
Bell & Co.—Vernisol ... 60
Benger & Co.—
Liquor Pancreaticus ... 25
Liquor Pepticus ... 25
Bishop, Ltd.—
Valentte's Effervescent Compressed Tablets ... 59
Brady & Martin—
Extract Malti Cum Petroleo (Brady) ... 15
Liquor Bismuthi Co. e Pepsina ... 15
Liquor Cerii (B. & M.) ... 15
Tinctura Opii Purificata ... 15
Brin's Oxygen Co.—Brin's Oxygen ... 60
Bullock & Co.—
Pepsina Porci ... 94
Acid Glycerine of Pepsine ... 94
Burroughs, Wellcome & Co.—
Lanoline ... 33
Toilet Lanoline ... 33
Lanoline Toilet Soap ... 33
Kepler Solution of Cod Liver Oil in Malt Extract ... 34
Tabloid Effervescent Artificial Mineral Water Salts ... 32
Tabloid Easton Syrup ... 35
Tabloid Hypophosphites Compound ... 35

PAGE

CHEMISTS—(Continued)
Burroughs, Wellcome & Co.—
Tabloid Chemical Food ... 36
Tabloid Medicine Cases ... 36, 37
Tabloid Hypodermic Cases ... 37
Cox's Tasteless Pills ... 57
Durant & Co.—
Dylissia Medical Cream ... 61
Evans, Lescher & Webb—
Casaura Hawley ... 21
Thyrogiandia ... 21
Fairchild Bros. & Foster—
Pepsencia ... 79
Grtlion's Tamar Indien ... 59
Hewlett & Son—
Liq. Santal Flav. e. Bucha et Cubeba ... 60
Kimpton & Co.—
Gambier Poudre Antiasthmatique 56
Kreochyle Co.—Barff Boro-Glycoride 60
Kuhn—
Iodoformogen ... 40
Papain-Finkler ... 40
Colchi-Sal ... 40
Lorens—
Airol Roche ... 59
Thiocol Roche ... 59
Mackey, Mackey & Co.—
Mistura Cascara Sagrada Comp. ... 59
Meister, Lucius & Bruning—
Nirvanine ... 52
Knorr's Antipyrin ... 58
Migranine ... 56
Lysidine ... 56
Argonin ... 56
Orthoform ... 56
Koch's New Tuberculine ... 56
Behring's Diphtheria Remedy ... 54
Formaldehyde ... 56
Dermatol ... 56
Newbery & Sons—
Pulvis Jacobi Ver ... 61
Bromo Soda ... 36
Elixir Salicylic Comp. ... 39
Ingluvin ... 36
Nicolay & Co.—
Hommel's Hæmatogen ... 42
Oxydol, Ltd.—Oxydol ... 56
Parke, Davis & Co.—
Ergot &c. ... 23
Rebman—Antidiphtheritic Serum &c. 65
Roberts & Co.—
Ethol ... 41
Slinger & Son—
Nutrient Suppositories ... 61
Standard Malt Extract Co.—
Diastol ... 55
Malt Extract ... 55
Turner & Co.—
Piperadine Tartrate ... 58
Guaiperol ... 58
Erythrol Tetra Nitrate ... 58
Wilcox & Co.—
Cigars de Joy ... 70
Crystallized Digitaline ... 38
Grimault's Cigarettes ... 14
Murrhol ... 14
Morrhuol-Creosoté ... 14
Santal-Midy ... 14
Apiolinc ... 14
Desart's Syrup of Lacto-Phosphate 14
Zimmermann—
Schering's Urotropine ... 58
Beta-Eucaine ... 10

FILTERS:—
Defrien & Sons—
Pasteur Germ Filter ... 68

FOODS:—
Allen & Hanburys—
Allenburys Milk Foods ... 31
Allenburys Malted Foods ... 31
Armour & Co.—
Glycerine Extract of Red Bone Marrow ... 43
Beef Juice ... 43
Aylesbury Dairy Co.—
Humanised Milk ... 16

PAGE

FOODS—(Continued)
Benger & Co.—
Peptonised Beef Jelly ... 25
Peptonised Chicken Jelly ... 25
Benolat—Specialities for Invalids ... 62
Bovril (Limited)—
Virol ... 47
Brand & Co.—Meat Juices ... 62
British Somatose Co., Ltd.—
Somatose ... 51
Cadbury's Cocoa ... 52
Dale & Co.—"Hini" Matton Essence 50
Falières Phosphatine Agency—
Falières Phosphatine ... 57
Frame Food Co.—
Frame Food Diet ... 17
Frame Food Jelly ... 17
Hill & Son—
Patent Malted Nursery Biscuits ... 63
Hovis Bread Flour Co., Ltd.—
Hovis Bread ... 48
Lazenby & Son—Soup Squares ... 53
Liebig Co.—Extract ... 53
Plasmon Syndicate—Plasmon ... 44, 45
Red White and Blue French Coffee ... 61
Reiner & Co.—Tropon ... 51
Robinson's Patent Barley ... 49
Savory & Moore—
Peptonised Cocoa and Milk ... 52
Peptonised Milk ... 52
Peptonised Coffee and Milk ... 52
Tibbles' Vi-Cocoa, Ltd.—Vi-Cocoa ... 50
Van Houten & Zoon—Cocoa ... 18
Welford & Sons—
Milk Preparations ... 46
Wilcox & Co.—
Vin Mariani ... 26
Desiccated Extract of Malt ... 26

FURNITURE &c.:—
Carter—Invalid Furniture ... 67
Maple & Co.—
Russell Shatter Front Writing Table ... 68

MED. AND SURG. APPLIANCES:—
Allen & Hanburys—
Allenburys Feeder ... 31
Allenburys Milk Pasteuriser ... 30
Arnold & Sons—
New Aseptic Instrument Cabinets 39
Phonophore ... 39
Bailey & Son—
Patent Abdominal Belts ... 15
Special Clinical Thermometers ... 15
Evans & Wormull—
Copper Sterilizer ... 68
Gimbel—
Crêpe Velpeau Bandages ... 14
Crêpe Velpeau Abdominal Binders 14
Godfrey & Cooke—
Chloride of Ammonium Inhaler ... 64
Huxley—Abdominal Belts &c. ... 63
Krohne & Sesemann—Bandages ... 12
Millikin & Lacey—Osteology &c. ... 67
Milne—Antiseptic Ligatures ... 66
Nisbett, Sutherland & Marcuson—
Improved Medical Battery and Accessories ... 64
Pocock—Tubular Water Bed ... 67
Pond—Arch Support Socks ... 11
Pope & Plante—
Elastic Stockings ... 65
Abdominal Supporting Belts ... 65
Portia Co.—Stocking Suspender ... 63
Robinson & Sons—Gamgee Tissue ... 13
Scales & Co.—
Kentbury Patent Medical Bag ... 63
Ward & Co.—Surgical Indiarubber ... 85

MINERAL WATERS:—
Blake, Sandford & Blake—
Lithia &c. ... 60
Contrexeville Pavillon ... 62
Davis—Natural Mineral Waters ... 63
" Pure Aërated Waters ... 63
Hogg & Son—Lithia Waters ... 61
Ingram & Royle, Ltd.—
Carlsbad Natural Mineral Waters 55
Vichy ... 54

PAGE

MINERAL WATERS—(Continued).
Riddle & Co.—
Stower's Lime Juice Cordial ... 62
Robinson's Concentrated Waters ... 62
Wilcox & Co.—
Franz Josef Natural Aperient Water ... 32

OPTICIANS:—
Curry & Paxton—Glasses ... 64

PRINTERS AND ENGRAVERS:—
Cooke & Co.—Brass Name Plates ... 11
Culleton—
Brass Door Plates ... 12
Heraldry &c. ... 12

SANITARY APPLIANCES &c.:—
Condy's Fluid ... 14
Defrien & Sons—
Equifex Disinfection Appliances ... 68
Steam Stoves ... 68
Sprayers ... 68
Kuhn—
Chinosol ... 40
Lorimer & Co.—
Fels's Germicide Soap ... 38
Portable Buildings Co.—
Shelter for Consumptives ... 12
Walker—Carbolacene ... 12

STATIONERY &c.:—
Parkins & Gotto—Doctors' Bills ... 11

STOVES:—
Roberts—Stoves ... 11
Sanitary Association, Gloucester—
Ruthernic Gas Ventilating Stove 11

TAILORS, BOOTMAKERS, &c.:—
Hamilton & Co.—
Capote Ulster ... 63
Doctor's Capote ... 63
Elastic Dress Suits ... 63

TOBACCO, CIGARS &c.:—
Benson & Co.—Cigars ... 61

VACCINE LYMPH:—
Assoc. for Pure Vaccine Lymph ... 65
Birmingham Calf Lymph Estab. ... 65
British Calf Vaccine Institution ... 65
Faulkner's and The British Calf Vaccine Institution ... 65
Hime—Glycerinised Calf Vaccine ... 65
Jenner Institute for Calf Lymph ... 65
Rebman—
Glycerinated Pure Calf Lymph ... 65
Renner's Calf Lymph Establishment ... 65

WALL-PAPERS &c.:—
Woollams & Co.'s Non-Arsenical Wall-papers ... 14

WATCHMAKERS &c.:—
Benson—Doctor's Watch ... 64

WINES, BEER, SPIRITS &c.:—
Archer & Co.—Old Cognac Brandy ... 61
Back & Co.—"G B" Diabetic Whisky 61
Buchanan Blend Scotch Whisky ... 61
Douglas & Mason—Scotch Whisky ... 94
Martell's Three Star Brandy ... 54
Wright & Son, Ltd.—
Sloe Gin ... 84
Blackberry Gin ... 84

MISCELLANEOUS:—
Ayrton & Saunders—Corks ... 64
Bruce—Safety Reflector Lamp ... 66

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

IN THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (commencing at any time) are payable in advance.

ADVERTISING.

Books and Publications	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
Situations Wanted and Vacant		0 4 6
(Seven lines=about 65 words.)	Every additional line	0 0 6

Answers are received at the Offices, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, *accompanied by a remittance.*

Cheques and Post Office Orders (Crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Railway Bookstalls, and may be ordered through any Bookseller.

OFFICES: 423 AND 424, STRAND, LONDON, W.C., AND 1, 2, AND 3, BEDFORD STREET (ADJOINING).

J. & A. CHURCHILL'S PAGE.

Now ready, Eighth Edition, with Plates, crown 8vo, 10s.

CHARTERIS' MEDICINE.

*** This Edition is edited by Dr. F. J. CHARTERIS, under the supervision of Professor STOCKHAM, of Glasgow University.

The Blood: How to Examine and Diagnose its Diseases. By ALFRED C. COLES, M.D., B.Sc. of Public Health, Edinburgh. With 6 Coloured Plates, 8vo, 10s. 6d.

"An extremely useful book, and should be in the hands of all those who desire to work at the subject with which it deals."—DUBLIN JOURNAL OF MEDICAL SCIENCE.

A German-English Dictionary of Medical Terms. By FREDERICK TREVES, Surgeon to the London Hospital, and HUGO LANG, B.A. Crown 8vo, half calf, 12s.

"Decidedly superior to any book of its class."—N. Y. MED. JOUR.

Surgical Emergencies; together with the Emergencies attendant on Parturition and the Treatment of Poisoning. By PAUL SWAIN, F.R.C.S., Surgeon to the South Devon and East Cornwall Hospital. Fifth Edition, with 149 Engravings, crown 8vo, 6s.

"An admirable little book ..... brought well up to date."—THE LANCET.

"Should have a place on the shelves of every busy practitioner."—PRACTITIONER.

"We can cordially commend anew Mr. Swain's little book."—EDINBURGH MEDICAL JOURNAL.

The Physiology of Death from Traumatic Fever: a Study in Abdominal Surgery. By JOHN D. MALCOLM, M.B., C.M. Edin., Surgeon to the Samaritan Free Hospital. 8vo, 3s. 6d.

By E. HURRY FENWICK, F.R.C.S.,

Surgeon to the London Hospital, and to St. Peter's Hospital for Urinary Diseases.

Tumours of the Bladder; their Pathology, Diagnosis, and Treatment. The Jacksonian Prize Essay of 1887 (rewritten) with 200 additional cases. In Four Fasciculi. Fasc. I., royal 8vo, 5s.

The Cardinal Symptoms of Urinary Disease; their Diagnostic Significance and Treatment. 350 pp., Illustrated, 8vo, 2s. 6d.

Electric Illumination of the Bladder and Urethra as a Means of Diagnosis of Obscure Vesico-Urethral Diseases. Second Edition, with 50 Engravings, 8vo, 6s. 6d.

And in conjunction with Dr. EMIL BURCKHARDT, of Basle.

Atlas of Electric Cystoscopy. With 34 Coloured Plates, embracing 83 Figures, royal 8vo, 21s.

On some of the Mental Affections of Childhood and Youth; being the Lettsomian Lectures delivered before the Medical Society of London in 1887; with other Papers. By J. LANGDON-DOWN, M.D., F.R.C.P., Consulting Physician to the London Hospital. Post 8vo, 6s.

"Dr. Down shows a happy talent for presenting the main facts and avoiding immaterial details."—LONDON MEDICAL RECORD.

"A series of essays which will henceforth occupy a place of the first importance in the literature of the subject."—THE PRACTITIONER.

The Treatment and Education of Mentally Feeble Children. By FLETCHER BEACH, M.B., F.R.C.P. Physician to the West End Hospital for Nervous Diseases; formerly Medical Superintendent of the Darenth Schools for Imbecile Children. 8vo, 1s. 6d.

"We recommend the perusal of this practical work to all who are concerned with the care and training of children of deficient mental power."—BRITISH MEDICAL JOURNAL.

Now ready, Eighth Edition, Post 8vo, 12s. 6d.

WILSON'S HYGIENE.

For the most part Rewritten and greatly Enlarged, with new Illustrations and Digest of Sanitary Law.

Practical Ambulance Tablets. By Sidney PARTRIDGE, M.D., Examiner and Lecturer to the St. John Ambulance Association. Fourth Edition, Enlarged, with Engravings, 1s.

Illustrated Ambulance Lectures (to which is added a Nursing Lecture) in accordance with the Regulations of the St. John Ambulance Association. For Male and Female Classes. By JOHN M. H. MARTIN, M.D., Blackburn. Fourth Edition, with 60 Engravings, crown 8vo, 2s.

WORKS FOR NURSES.

A Manual for Hospital Nurses and Others ENGAGED in ATTENDING on the SICK. By EDWARD J. DOMVILLE, L.R.C.P., M.R.C.S. Eighth Edition, crown 8vo, 2s. 6d.

A Manual of Nursing, Medical and Surgical. By CHARLES J. CULLINGWORTH, M.D., F.R.C.P. Third Edition, fcap. 8vo, 2s. 6d.

A Short Manual for Monthly Nurses. By C. J. CULLINGWORTH, M.D. Fourth Edition. Revised by M. A. ATKINSON. Fcap. 8vo, 1s. 6d.

Notes on Gynæcological Nursing. By J. B. HELLIER, M.D. Fcap. 8vo, 1s. 6d.

Lectures on Medicine to Nurses. By HERBERT E. CUFF, M.D. With 25 Illustrations, crown 8vo, 3s. 6d.

Antiseptic Principles for Nurses. By C. E. RICHMOND, F.R.C.S. Fcap. 8vo, 1s.

A Short Dictionary of Medical Terms. 2s. 6d.

The Practice of Midwifery. By D. Lloyd ROBERTS, M.D., F.R.C.P., Physician to St. Mary's Hospital for Women and Children, Manchester. Fourth Edition, with 2 Coloured Plates and 226 Woodcuts, fcap. 8vo, 10s. 6d.

"Dr. Roberts knows what to say and how to say it so as to stamp it on the mind of the reader."—THE LANCET.

"Up to date by special chapters on Antiseptic Delivery, Symphysiotomy, Different Methods of Transfusion, &c."—DUBLIN JOURN. MEDICAL SCIENCE.

Preparing for Publication, by the same Author.

A Handbook of Operative Gynæcology.

A First Series of Fifty-four Consecutive Ovariotomies, with FIFTY-THREE RECOVERIES. By A. C. BUTLER-SMYTHE, F.R.C.P. Edin., F.R.C.S. Edin., Surgeon to the Samaritan Free Hospital, Senior Surgeon to the Grosvenor Hospital for Women and Children. 8vo, 6s. 6d.

"The reader looks for facts, and in this work they appear to be stated with perfect candour."—BRIT. MED. JOUR.

"The book can be read with profit by all, for the author is no slave to authority."—DUBLIN JOURNAL OF MEDICAL SCIENCE.

"We recommend the perusal of these cases to those of our readers who are interested in this subject."—GLASGOW MEDICAL JOURNAL.

The Ophthalmoscope: a Manual for Students. By GUSTAVUS HARTRIDGE, F.R.C.S., Surgeon to the Royal Westminster Ophthalmic Hospital. Third Edition, with 80 Illustrations, crown 8vo, 4s. 6d.

By the same Author.

The Refraction of the Eye. Ninth Edition, with 104 Illustrations, crown 8vo, 6s.

London: J. & A. CHURCHILL, 7, Great Marlborough Street.

Concise yet comprehensive summaries of all in periodical literature important to the practitioner. Facts, not mere opinions, characterise the "Review," instead of the usual commonplace remarks and indiscriminate notices of crude and unproved views which constitute many so-called "Epitomes.'

THE MEDICAL REVIEW.

(MEDICAL AND SURGICAL REVIEW OF REVIEWS)

An Indexed and Illustrated Monthly Record of all that is important to the practitioner in the Medical Periodicals of the World.

Price 20s. per annum, post free to any part of the World.

PRINTED IN LARGE CLEAR TYPE, ON SUPERFINE PAPER.

By the suppression of all unessential matter, a paper written with any definite object—and such alone is valuable—can generally be compressed into a comparatively brief report, and yet remain a clear and readable account of the subject, so that nothing of importance is lost, and often, in lucidity, much is gained. Merely to mention a few of the leading features of an article serves no useful purpose.

"..... The new 'Review of Reviews' will be found extremely useful to the busy practitioner."—THE LANCET.

"..... A great boon to the profession all over the world. ..... I applaud not only your scheme, but the manner of its execution. ....."—JONATHAN HUTCHINSON, LL D., F.R.S., Ex-President of the Royal College of Surgeons, England.

"..... I think you are about to fill a very great want. ....."—T. CLIFFORD ALLBUTT, M.A., M.D., F R.C.P., F.R.S., Regius Prof. of Physic, Cambridge University.

"..... It would be impossible for such a journal not to take at once a first place. ....."—BIRMINGHAM MEDICAL REVIEW.

"As a constant reader of the 'Review,' permit me to express my appreciation. ..... It will be found most useful by Medical Officers in the Army, Navy, and Colonial Services. ....."—SIR WILLIAM KYNSEY, C.M.G., Late Army Medical Staff, late Inspector-General of Hospitals, Ceylon.

"..... Of great value to the general practitioner, and to teachers and authors. ....."—BYROM BRAMWELL, M.D., F.R.C.P.Edin.

"Destined to the greatest and legitimate success. ..... Well edited. Giving an exact account of all of importance in science and medical practice."—JOURNAL DES PRATICIENS.

"..... Quite impossible to estimate its great value to the busy practitioner, who, with so little expenditure of time, will be able to keep up with the medical literature of the day. ....."—ROBERT BELL, M.D., F.F.P.S.

"In appearance and style the 'Review' is all that could be desired. ..... The necessity for such a journal is well-nigh imperative. ..... Important facts are shortly told, with neither the prolixity of the clinical lecture nor the padding of the professional journalist."—JOURNAL OF TROPICAL MEDICINE.

"..... A great advance. ..... The articles are not too short to be useful and practical, and the index with each number renders reference easy."—C. M. BRISLEY, M.R.C.S., L.R C.P.

"A remarkable periodical. ..... Edited with great taste and luxury of type, and of the very greatest value to all who desire to keep themselves *au courant* with the progress of the medical world. ....."—BOLETIN DE LA REVISTA DE MEDICINA Y CIRURGIA PRÁTICAS, MADRID.

"..... Your magazine, dealing with the best, most recent, and determined facts, deserves the support of the entire medical faculty. ....."—T. ERSKINE MOORE, L.R.C.P., L R C.S.Edin., L M.

"..... We cannot conceive a more useful publication than this, which should become one of the most popular medical journals of the age. ..... In addition to the British, Colonial, and American papers, it epitomises all the foreign journals, so that nothing of note which is being done or attempted in the civilised world need escape a careful reader."—JOURNAL OF BALNEOLOGY AND CLIMATOLOGY.

"..... I had not thought it possible for concise summaries to give such complete and practical details. ....."—ROBERT BROWN, M.A., M.B., C.M.

"..... I have already found several exceedingly useful, and, to me, new points in practice, by which my patients have benefited. ..... As an up-to-date work of reference your bound volumes will be invaluable. ....."—STUART HALLOWS, M.B. Edin.

"..... The 'Review' brings me into touch with methods and ideas which I could not possibly have otherwise obtained. ..... No surgeon can afford to do without such an excellent index to scientific progress."—J. O'CONOR, M.A., M.D., Senior Medical Officer, British Hospital, Buenos Aires.

N.B.—Subscriptions should be sent to The SECRETARY, The Medical and Surgical "Review of Reviews," Ltd., Connaught Mansions, Victoria Street, London, S.W. Drafts, Cheques and Postal Orders to be made payable to The Medical and Surgical "Review of Reviews," Ltd., and crossed "Brown, Janson, & Co."

MESSRS. LONGMANS & CO.'S LIST.

JUST PUBLISHED. With 440 Illustrations. Medium 8vo, 25s.

SURGERY:

A Treatise for Students and Practitioners.

By T. PICKERING PICK,

Consulting Surgeon to St. George's Hospital; Senior Surgeon to the Victoria Hospital for Children; H.M. Inspector of Anatomy in England and Wales.

FOURTH EDITION. JUST PUBLISHED. Enlarged and Thoroughly Revised. With 217 Illustrations. 8vo, 25s.

DISEASES OF CHILDREN;

Medical and Surgical.

By HENRY ASHBY, M.D.Lond., F.R.C.P. & G. A. WRIGHT, B.A.Oxon., F.R.C.S.Eng.,

Physician to the Manchester Children's Hospital, &c. Assistant Surgeon to the Manchester Royal Infirmary, &c.

*** In preparing the Fourth Edition the whole of the work has been thoroughly revised, and many of the chapters have been entirely re-written. Considerable additions have been made in the text, some sixty additional pages, twenty-five new photographs and fourteen plates having been added.

To be Published in Six Parts. Part I. Now Ready. Price, 10s. 6d. Part II. Just Published. Price, 14s.

A MANUAL OF SURGICAL TREATMENT.

By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S.,

Professor of Surgery in King's College, London; Surgeon to King's College Hospital, and Children's Hospital, Paddington Green, &c., and

F. F. BURGHARD, M.D. & M.S.Lond., F.R.C.S.,

Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, &c.

PROPOSED DIVISION OF WORK.

PART I.—The Treatment of General Surgical Diseases, including Inflammation, Suppuration, Ulceration, Gangrene, Wounds and their Complications, Infective Diseases and Tumours; the Administration of Anæsthetics. With 66 Illustrations, Royal 8vo, 10s. 6d. [*Ready.*

PART II.—The Treatment of the Surgical Affections of the Tissues, including the Skin and Subcutaneous Tissues, the Nails, the Lymphatic Vessels and Glands, the Fasciæ, Bursæ, Muscles, Tendons, and Tendon-sheaths, Nerves, Arteries, and Veins. Deformities. With 141 Illustrations, Royal 8vo, 14s. [*Just published.*

PART III.—The Treatment of the Surgical Affections of Bones and Joints, including Fractures and Dislocations, Excisions, and Amputations. [*In preparation.*

PART IV.—The Treatment of the Surgical Affections of the Head, Face, and Neck; Throat, Nose, and Ear. [*In preparation.*

PART V.—The Treatment of the Surgical Affections of the Thorax, Breast, Spine, and Generative Organs. [*In preparation.*

PART VI.—The Treatment of the Surgical Affections of the Alimentary and Urinary Systems. [*In preparation.*

RECENTLY PUBLISHED, with 393 Illustrations, 8vo, 18s.

A MANUAL OF MIDWIFERY. By William Radford Dakin,

M.D., F.R.C.P., Obstetric Physician and Lecturer on Midwifery at St. George's Hospital; Examiner in Midwifery and Diseases of Women on the Conjoint Board of the Royal College of Physicians and Surgeons in England, &c.

RECENTLY PUBLISHED, with 160 Illustrations, 8vo, 25s.

THE DISEASES OF THE LUNGS. By James Kingston Fowler,

M.A., M.D., F.R.C.P., Physician to the Middlesex Hospital, and to the Hospital for Consumption and Diseases of the Chest, Brompton late Examiner in Medicine at the University of Cambridge, and on the Conjoint Examining Board in England; and RICKMAN JOHN GODLEE, M.S., F.R.C.S., Fellow and Professor of Clinical Surgery, University College, London; Surgeon to the University College Hospital and to the Hospital for Consumption and Diseases of the Chest, Brompton; Surgeon-in-Ordinary to Her Majesty's Household.

THIRD EDITION, Revised, with 314 Illustrations, 8vo, 18s.

AN INTRODUCTION TO HUMAN PHYSIOLOGY. By Augustus

D. WALLER, M.D., F.R.S., Lecturer in Physiology at St. Mary's Hospital Medical School, London.

THIRD EDITION, Thoroughly Revised and Partly Re-written, 8vo, 5s.

ESSENTIALS OF CHEMICAL PHYSIOLOGY. For the Use of

Students. By W. D. HALLIBURTON, M.D., B.Sc., M.R.C.P., Professor of Physiology at King's College, London; Lecturer on Physiology at the London School of Medicine for Women, &c.

FIFTH EDITION, Revised and Enlarged, Illustrated by nearly 400 Figures, 8vo, 8s. (Interleaved, 10s. 6d.)

THE ESSENTIALS OF HISTOLOGY: Descriptive and Practical.

By E. A. SCHÄFER, F.R.S., Professor of Physiology in the University of Edinburgh.

With 86 Illustrations, 8vo, 18s.

WOUNDS IN WAR: the Mechanism of their Production and

their Treatment. By Surgeon-Colonel W. F. STEVENSON (Army Medical Staff), A.B., M.B., M.Ch. Dublin University, &c.

LONGMANS, GREEN & CO. LONDON, NEW YORK, & BOMBAY.

7

JUST PUBLISHED. Crown 8vo, 6s.,

HEALTH ABROAD:

A MEDICAL HANDBOOK FOR TRAVELLERS.

Edited by EDMUND HOBHOUSE, M.A., M.D. Oxon., M.R.C.P.,

Assistant Physician to the Sussex County Hospital.

With Special Chapters on EGYPT and NORTH AFRICA, by Dr. Leigh Canney; CENTRAL AFRICA, by Dr. Harford Battersby; CONTINENTAL TRAVEL, by Dr. Stuart Tidey and the Editor; SOUTH AFRICA, by Dr. B. J. Guillemard; SOUTH AMERICA, by Dr. G. H. Pennell; INDIA, by Dr. W. J. Simpson; and AUSTRALIA, NEW ZEALAND, and NORTH AMERICA, by the Editor.

London: SMITH, ELDER, & Co., 15, Waterloo-place, S.W.

With Illustrations. Demy 8vo, 12s. 6d.

ALBUMINURIA AND BRIGHT'S DISEASE.

By N. TIRARD, M.D., F.R.C.P.,

Physician to King's College Hospital, and to the Evelina Hospital for Sick Children.

"Thoroughly sound and well considered, and written in a pleasing and graceful style.....The descriptions of the symptoms and treatment of the various forms of Bright's disease are clear and essentially practical."—THE LANCET.

"This is a welcome contribution to the literature of renal disease. Written mainly from the clinical standpoint and based upon the author's own experience, its practical value is enhanced by the ease and simplicity of its style, and the clearness of its illustrations. ..... We can confidently recommend it alike as a text-book for those commencing to study the subject, and as a work of reference for practitioners wishing to refresh their knowledge."—BRITISH MEDICAL JOURNAL.

London: SMITH, ELDER, & CO., 15, Waterloo Place, S.W.

The Oldest and Most Popular Medical Diary.

SMITH'S

Prices 2/6 to 6/6.

PHYSICIANS AND SURGEONS'

Fifty-Fourth Year of Issue.

VISITING LIST, 1900.

Medical Account Books; Bill Heads; Note Papers Stamped Relief; Demy Wrapping Papers Prescription Papers; Temperature Charts; Case Books and Obstetric Registers, &c. &c.

PROSPECTUS POST FREE ON APPLICATION.

HAZELL, WATSON & VINEY, Ltd., 52, LONG ACRE, LONDON W.C

Now ready, price 2s. 6d., Fourth Edition.

A PHARMACOPŒIA OF DISEASES OF THE SKIN.

Containing a Classification, Rules of Diet, Baths, Concise Formula, and Therapeutical Index.

By JAMES STARTIN, Senior Surgeon and Lecturer to the London Skin Hospital, Fitzroy-square, W.

Bristol: Wright & Co. London: Simpkin, Marshall, & Company Ltd.

By Dr. George Harley, F.R.S.

Diseases of the Liver, with and without Jaundice. 3 Illustrations. ... ... price 21 0

"A storehouse of practical information."—CANAD. PRACT.
"The subjects dealt with are marvellously great."—MED. TIMES.
"No book can be advantageously compared to it."—JOURN. DE MÉD.
"Most excellent and thoroughly practical."—EDIN. MED. JOUR.
"The best authority on the liver that can be found."—MED. REGIST.
"For originality of thought and diagnostic sagacity this work stands unexampled."—AUSTR. MED. GAZ.

London: J. & A. Churchill, 7, Great Mariborough-street.

By Dr. JULIUS ALTHAUS,

Consulting Physician to the Hospital for Epilepsy and Paralysis, Regent's-park.

ON FAILURE of BRAIN POWER: its NATURE and TREATMENT.

Fifth Edition, price 5s. net.

"Rarely does one see in medical literature so much good matter in so little bulk, such a mastery of facts permeated by thought."—EDIN. MED. JOURN.

THE VALUE of ELECTRICAL TREATMENT, with an essay on Electricity in Gynæcology, by Dr. APOSTOLI, of Paris. Third Edition, price 3s. 6d.

ON IMPOTENCY and its TREATMENT by ELECTRICITY. Second Edition, price 1s.

London: Longmans, Green & Co., Paternoster-row.

Fifth Edition, with Coloured Plates, price 12s. 6d.

FIELD'S DISEASES OF THE EAR.

"Forms an excellent guide for the practitioner or the Student."—BRIT. MED. JOUR.

London: Baillière & Co., King William-street, Strand.

By FREDERICK TREVES, F.R.C.S.,

Consulting Surgeon to the London Hospital; Surgeon in Ordinary to H.R.H. the Duke of York.

PERITYPHLITIS AND ITS VARIETIES:

THEIR PATHOLOGY, CLINICAL MANIFESTATIONS, AND TREATMENT.

(Reprinted from CLIFFORD ALLBUTT'S "SYSTEM OF MEDICINE.")

Price Half a Crown.

Macmillan & Co.

By the same Author.

PERITONITIS.

ITS CAUSES, SYMPTOMS, AND TREATMENT.

(The Lettsomian Lectures.) Price 2s. 6d.

Bale & Sons, Great Titchfield-street, W.

By the same Author.

INTESTINAL OBSTRUCTION:

ITS VARIETIES, WITH THEIR PATHOLOGY, DIAGNOSIS, AND TREATMENT.

(Jacksonian Prize Essay.) An Entirely New Edition, with 118 Illustrations, price 21s.

Cassell & Co., London.

VOL. I. READY THIS DAY. Handsome square 8vo, 632 pages, beautifully illustrated, with 151 Full-page Plates, bound in half Morocco leather. Price 36s. net. DESCRIPTIVE CIRCULAR POST FREE ON APPLICATION.

SURGICAL ANATOMY.

A TREATISE on HUMAN ANATOMY in its APPLICATION to the PRACTICE of MEDICINE and SURGERY.

By JOHN B. DEAVER, M.D., Surgeon-in-Chief to the German Hospital, Philadelphia; Assistant Professor of Applied Anatomy, University of Pennsylvania.

IN THREE VOLUMES. Illustrated by over 400 Plates, nearly all drawn for this work from Original Dissections.

☞ ORDERS TAKEN FOR COMPLETE SETS ONLY.

SYNOPSIS OF CONTENTS.—CONTENTS OF VOLUME I.—Upper Extremity.—Back of Neck, Shoulder, and Trunk.—Cranium.—Scalp.—Superficial Anatomy of Face.—Face. (Volumes II. and III. in active preparation.)

Just Ready. In one octavo volume of about 325 pages, containing a number of Charts and Maps, and numerous Illustrations. Price 14s.

The Hygiene of Transmissible Diseases:

Their CAUSATION, MODES of DISSEMINATION, and METHODS of PREVENTION.

By A. C. ABBOTT, M.D., Professor of Hygiene in the University of Pennsylvania; Director of the Laboratory of Hygiene.

In a few days. In one very handsome octavo volume of 672 pages, with 348 Engravings, and 6 Coloured Plates. Price 20s. net.

A Text-book of Physiology for Students and Practitioners.

By WINFIELD S. HALL, A.M., M.D., Ph.D., Professor of Physiology in the North-Western University Medical School, Chicago.

published. In one octavo volume of 400 pages, Illustrated. Price 17s.

The Surgical Complications and Sequels of Typhoid Fever.

By WILLIAM W. KEEN, M.D., LL.D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia; Corresponding Member of the Société de Chirurgie, Paris; Honorary Member of the Société Belge de Chirurgie, &c.

This day. New Edition. One royal 8vo volume of 583 pages. Half-bound leather. Price 21s. net.

Psychopathia Sexualis.

A Medico-legal Study by Dr. R. VON KRAFFT-EBING, Professor of Psychiatry and Neurology, University of Vienna. ONLY Authorised Translation from the Tenth enlarged and revised German Edition.

Sold only to Members of the Medical and Legal Profession.

Just ready. In one handsome octavo volume of 630 pages, with over 150 Illustrations and 6 Lithographic Plates. Price 20s. net.

Diseases of the Nose and Throat.

By D. BRADEN KYLE, M.D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia; Consulting Laryngologist, Rhinologist, and Otologist, St. Agnes' Hospital.

From the Second German Edition, Revised and Enlarged. Just Ready. In demi octavo, about 300 pages. Cloth. Price 12s.

The Pathology and Treatment of Sexual Impotence.

By VICTOR G. VECKI, M.D. Sold only to Medical Men.

New (Fourth) Edition. Just Ready. In one 12mo vol. of 594 pages, with 502 Engravings, many being Photographic. Cloth. Price 14s. net.

Minor Surgery and Bandaging.

By HENRY R. WHARTON, M.D., Demonstrator of Surgery in the University of Pennsylvania.

London: REBMAN, Ltd., 129, Shaftesbury Avenue, Cambridge Circus, W.C.

Reg. Tel. Address: "SQUAMA, LONDON." *Telephone No. 2026 GERRARD.*

THE PRACTITIONER.

Edited by MALCOLM MORRIS.

Sixth Year of Publication under present Editorship.

The JANUARY issue—

Which begins the New Volume and affords a favourable opportunity for the commencement of new Subscriptions—will be distinguished by the following Special Features:—

Special Articles on PNEUMONIA by Sir William Broadbent, Sir William Gairdner, Dr. Hector Mackenzie, Dr. Newsholme.—HEROES of MEDICINE (with specially reproduced Portraits).—CAUSERIES of a MEDICO-LITERARY CHARACTER.—ILLUSTRATED REVIEWS of the MEDICAL SCIENCES, and COMMENTS on CURRENT EVENTS DURING the MONTH.

Annual Subscription, 21s. post free.

Single Copies, price 2s. each, can be had by order of any Bookseller.

CASSELL & COMPANY, LTD., LUDGATE HILL, LONDON.

By C. MANSELL MOULLIN, M.D.Oxon., F.R.C.S., Surgeon and Lecturer on Surgery at the London Hospital; late Examiner in Surgery at the University of Oxford.

ENLARGEMENT OF THE PROSTATE.

ITS TREATMENT AND RADICAL CURE.

INCLUDING THE HUNTERIAN LECTURES.

Second Edition now ready.

By the same Author.

INFLAMMATION OF THE BLADDER,

AND URINARY FEVER.

Price 5s.

London: H. K. Lewis, 136, Gower-street.

Crown 8vo, cloth, pp. xii.-141, Illustrated with 27 Wood Engravings in the text, price 3s.

TRAUMATIC INFECTION:

HUNTERIAN LECTURES delivered at the ROYAL COLLEGE of SURGEONS of ENGLAND.

By CHARLES BARRETT LOCKWOOD, F.R.C.S., Assistant Surgeon and Lecturer on Descriptive and Surgical Anatomy, St. Bartholomew's Hospital. Late Hunterian Professor, Royal College of Surgeons of England. Late Surgeon, Great Northern Central Hospital, &c. &c.

BY THE SAME AUTHOR.

Second Edition, crown 8vo, cloth, pp. xvi.-233, price 4s.

ASEPTIC SURGERY.

BY THE SAME AUTHOR.

Crown 8vo, cloth, pp. xii.-280, with 23 Illustrations in the text, price 4s. 6d.

THE RADICAL CURE OF HERNIA, HYDROCELE, AND VARICOCELE.

YOUNG J. PENTLAND,

EDINBURGH: 11, TEVIOT PLACE. LONDON: 38, WEST SMITHFIELD, E.C.

PRACTICAL NURSING.

By ISLA STEWART, Matron of St. Bartholomew's Hospital, London, and HERBERT B. CUFF, M.D., F.R.C.S., Medical Superintendent, North-Eastern Fever Hospital, Tottenham, London.
In 2 vols., crown 8vo. Vol. I., 3s. 6d. net.

William Blackwood & Sons, Edinburgh and London.

THE FIRST NUMBER OF

THE GENERAL PRACTITIONER,

The new official Journal of the Incorporated Medical Practitioners' Association, will be published on Saturday next Weekly, price 3d. Sent free to members of the Association. Advertisements received up to Wednesday next.—Offices, 65 and 66, Chancery-lane, W.C.

Now ready, price 1s.

Application of Trusses to Herniæ.

Clinical Lecture delivered at King's College Hospital. By the late JOHN WOOD, F.R.S., F.R.C.S., Professor of Clinical Surgery at King's College, Senior Surgeon to King's College Hospital. Reprinted from "Medical Examiner," and illustrated by Matthews Brothers, Surgical Instrument Makers, 10, New Oxford-street, W.C.
London: Henry Renshaw, 356, Strand.

SIXTH EDITION. NOW READY, PRICE 12s. 6d.

DISEASES of the RECTUM.

By WM. ALLINGHAM, F.R.C.S.,
AND
HERBERT W. ALLINGHAM, F.R.C.S.,
Surgeon to the Household of H.R.H. the Prince of Wales; Surgeon to the Great Northern Hospital; Assistant Surgeon to St. George's Hospital; late Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum.

Also by Mr. HERBERT ALLINGHAM. Price 5s.

COLOTOMY,

INGUINAL, LUMBAR, and TRANSVERSE, for

CANCER and ULCERATIONS.

With Stricture of the Large Intestine.

London Bailliere, Tindall, & Cox, King William-street, Strand.

WORKS BY MR. MALCOLM MORRIS.

NEW and REVISED EDITION, with New Illustrations (Seventh Thousand).

Now Ready, price 10s. 6d.

DISEASES OF THE SKIN.

AN OUTLINE OF THE PRINCIPLES & PRACTICE OF DERMATOLOGY.

By MALCOLM MORRIS, F.R.C.S.Ed.,
Surgeon to the Skin Department, St. Mary's Hospital, London.

With COLOURED PLATES and WOODCUTS.

"Universally recognised as the most concise and readable of all the treatises on dermatology in the English language."
BRITISH MEDICAL JOURNAL.

Now ready, price 7s. 6d.

RINGWORM

IN THE LIGHT OF RECENT RESEARCH, PATHOLOGY, TREATMENT, PROPHYLAXIS.

By MALCOLM MORRIS,
Surgeon to the Skin Department, St. Mary's Hospital. With Twenty two Micro-photographs and a Coloured Plate.

"The clearest and most concise account of the results of an enormous amount of careful and laborious work."—THE LANCET.

Cassell & Company, Limited, London, Paris, New York and Melbourne.

19

NOW READY, with Photographic and numerous Illustrations, Third Edition, enlarged, price 10s.

ON DISEASES OF THE EYE.

By CHARLES BELL TAYLOR, F.R.C.S. & M.D.Ed.,
Fellow Medical Society, London; late President of the Parisian Medical Society; Surgeon, Nottingham and Midland Eye Infirmary.
London: Kegan Paul, Trench, Trübner, & Co. (Ltd.), Paternoster House, Charing-cross-road, W.C.

Just published, price 12s. 6d.

DISEASES OF THE JOINTS & SPINE.

NEW EDITION.

By HOWARD MARSH,
Surgeon to, and Joint Lecturer on Surgery at, St. Bartholomew's Hospital; Consulting Surgeon to the Hospital for Sick Children.

London: CASSELL & Co.

Just out, Fifth Edition, with 547 Coloured Illustrations, 31s. 6d. net.

The Throat and Nose
AND THEIR DISEASES.

By LENNOX BROWNE, F.R.C.S.E.
Senior Surgeon to the Central London Throat, Nose, and Ear Hospital.
"Fully abreast of the knowledge of to-day."—THE LANCET.
London: Baillière, Tindall, & Cox, 20-21, King William-street, Strand.

NOW READY, 8vo.
Vol. 32, with 19 Plates, 3 Charts, and 11 Illustrations in the Text, Price 16s., cloth.

Transactions of the Clinical Society

OF LONDON during its Thirty-second Session, October, 1898, to May, 1899, with list of Officers and Members, Report of the Council, Presidential Address, &c.
London: Longmans, Green, & Co.

STAMMERING.

ITS NATURE AND TREATMENT.

By EMIL BEHNKE.

Price 1s., post free, of Mrs. Emil Behnke, 18, Earl's-court-square, S.W., who receives Stammerers for Treatment. REFERENCES to Doctors whose stammer Mrs. Behnke has cured, and to others.

BOOKS WANTED, 25s. EACH OFFERED.

"Thackeray's Vanity Fair," in twenty shilling numbers; "Dickens's Pickwick Papers," in twenty shilling numbers; "Badminton Hunting," large paper copy, 1885; "Jorrock's Jaunts," 1843; "Life of a Sportsman," 1842; "George Meredith's Poems," 1851; Jackson's Old Paris," 1878; "Jesse's Richard III.," 1862; Stevenson's Edinburgh, 1879; "Jane Eyre," 3 vols., 1847; "Lorna Doone," 3 vols., 1869; "Crowe's Painting in Italy," 5 vols., 1864-71; "Symond's Italian Literature," 2 vols., 1881. Borrow's Wild Wales, 1862. Rare Books supplied. State wants.—BAKER'S GREAT BOOKSHOP, John Bright-street, Birmingham

WORKS ON

DEFORMITIES.

By HEATHER BIGG.

SPINAL CURVATURE: its Varieties and Treatment.
The DEFORMITIES of the HEAD and NECK.
In preparation. Fourth Edition.
A MANUAL of ORTHOPRAXY: Describing the Treatment of the Deformities, Debilities, and Deficiencies of the Human Body.
London: J. & A. Churchill, 7, Great Marlborough-street.

INDIAN MEDICAL RECORD.

A Weekly Journal of Medicine, Surgery, Obstetrics, Sanitation, and General Medical Intelligence.

Edited by JAMES R. WALLACE, M.D., F.R.C.S.I.

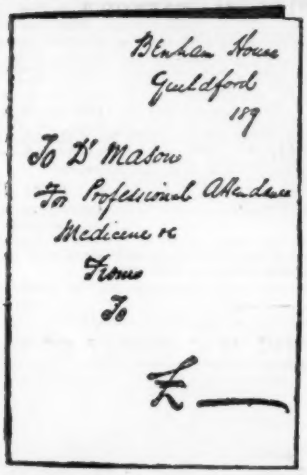
ANNUAL SUBSCRIPTION, Rs. 36.

A thoroughly independent, up-to-date medical newspaper. A perfect mirror of the current medical literature of the world. Circulates all over India, Burma, the Straits Settlements and China. Guaranteed issue of two thousand copies every Wednesday morning.

A SPLENDID MEDIUM FOR ENGLISH ADVERTISERS.

EDITOR'S OFFICE: 50, PARK ST., CALCUTTA.
British Agents:—MESSRS. A REDDICK & CO., 12, FURNIVAL STREET, HOLBORN, LONDON, E.C.

DOCTORS BILLS



Facsimile of handwriting guaranteed.

These Bill Forms save an immense amount of time and trouble. Specimens, with remarkably low prices, post free. Also Prescription Slips, Appointment Cards, Envelopes, Visiting Cards, &c. Doctors' Day Books and Ledgers made to order.

PARKINS & GOTTO

54 to 62, OXFORD STREET, LONDON, W.

POND'S ARCH-SUPPORT SOCKS.

PATENT 8491.

Flat feet prevented and cured.

As worn and recommended by Medical Men.

Price 5s. per pair; singles, 3s.; post, 3d.

EXTRACT FROM THE LANCET:—"A widespread, comfortable support."

Send outline of feet for size.

JAMES POND, 23, Castle Meadow, Norwich.

LONDON AGENTS:—MARSHALL & BURT, 444, Oxford Street, W

BRASS NAME PLATES

SPECIALLY ADAPTED

FOR THE PROFESSION.

Manufactured in Stout Metal, Deeply Engraved, Mounted on Polished Mahogany Blocks, with Fastenings ready for fixing, from 10/6 each.

J. W. COOKE & CO.,

Brass Plate Engravers, General Sign Writers, and Letter Manufacturers

75, FINSBURY PAVEMENT, LONDON, E.C.

SEND FOR OUR ILLUSTRATED CATALOGUE.

Telephone, 573 London Wall.

STOVES

TERRA-COTTA—PORTABLE

FOR COAL, OR COAL AND COKE

(ROBERTS'S IMPROVED PATENT.)

PURE AND AMPLE HEAT WITHOUT ATTENTION.

24 HOURS OR LONGER FOR ABOUT 1d.

The best stoves for Hospitals, Sick-rooms, Bedrooms, Greenhouses, &c. Pamphlet and authenticated testimonials from eminent medical men and others can be had. Stoves in use daily at Patentee's—

THOMAS ROBERTS, 34, Victoria-street, Westminster

THE

EUTHERMIC GAS VENTILATING STOVE

(Dr. BOND'S)

Stove with Heater out for Boiling Water.

Supplies a constant stream of Fresh Warm Air at the smallest cost of gas.

HIGHEST AWARDS.

FOR

BEDROOMS, CONSULTING ROOMS, OFFICES, HALLS, &c.

FOR DESCRIPTION, PRICE, &c., APPLY TO THE

SANITARY ASSOCIATION, GLOUCESTER.

DISPENSING BOTTLES AND PHIALS.

The Islington Glass Bottle Company

(H. HARRIS & CO.), 153, Upper Thames-street, City, London, E.C., supply the very best bottles at the lowest market prices as follows:—

THE NEW SHAPE, with Rounded Edges or the Ordinary Kind.

3 and 4 oz., plain or graduated ..... 8s. 6d. per gross.
6 and 8 oz., " " ..... 9s. 6d. "

WHITE MOULDED PHIALS, Plain or Teaspoons.

½ oz. and under, 3s. 6d. per gross. | 1½ oz. ..... 4s. 6d. per gross
1 oz. ..... 3s. 9d. " | 2 oz. ..... 5s. 0d.

Best Quality.

BLUE POISON BOTTLES, all sizes.

PLEASE NOTE.—The Green Glass can be had, washed and corked, ready for use, 1s. per gross extra. A trial of these would oblige.

Prompt attention to country orders. Goods delivered free within ten miles. Bankers: London and Westminster Bank.

Established upwards of 50 years.

DISPENSING BOTTLES AND PHIALS.

The North London Glass Bottle

COMPANY (I. ISAACS & CO., Proprietors), Office and Warehouse, 106, MIDLAND ROAD, ST. PANCRAS, LONDON, N.W., Stores Midland Railway Goods Depôt, St. Pancras, supply their celebrated dispensing bottles and phials at the following very low prices.

THE NEW SHAPE FLAT BOTTLES WITH ROUNDED EDGES.
Or the ordinary kind, plain or graduated.

3 & 4 ounce ... ... 8s. 6d. per gross.
6 & 8 " ... ... 9s. 6d. "
10 & 12 " ... ... 12s. 0d. "
16 " ... ... 16s. 0d. "

Oval, Octagon, or direct square shape the same price.

WHITE MOULDED PHIALS—BEST QUALITY.

½ ounce and under ... ... 3s. 6d. per gross.
1 " ... ... 3s. 9d. "
1½ " ... ... 4s. 6d. "
2 " ... ... 5s. 0d. "

Plain or Graduated to Teaspoons.

CRYSTAL BLUE TINTED BOTTLES—SPLENDID QUALITY.

3 & 4 ounce ... ... 10s. 0d. per gross.
6 & 8 " ... ... 11s. 0d. "

Plain or Graduated.

The Medical Profession should see a sample of these, which is forwarded free on application.

Prompt attention to Country orders. Packages 1s. each, allowed for if returned. Goods delivered free within seven miles. Bankers—"London and Westminster Bank," Bloomsbury Branch.

Established upwards of 50 years.

FLAT.

ROUND EDGES.

DISPENSING BOTTLES.

GREEN FLINT.—ALL SHAPES.

3 oz.	4 oz.	6 oz.	8 oz.
8/6	8/6	9/6	9/6 For Corks.
11/6	11/6	12/6	12/6 Screw Stopd.

WHITE VIALS.—Plain & Graduated

¼ oz.	1 oz.	1½ oz.	2 oz.
3/8	4/-	4/9	5/6 per gross.

FREE ON RAILS IN LONDON.

KILNER BROS.,

No. 8, G N. GOODS STATION, KING'S CROSS, LONDON.

FLAT.

SCREW STOPPERED.

BRASS DOOR-PLATES

with MAHOGANY BLOCK, ready for fixing to Door, Wall, or Gate.

With Name only ... ... 10s. 6d.
With Name and Profession ... ... 17s. 6d.

MEMORIAL BRASSES Designed and Engraved. Sketches and Estimates Free of Charge.

MEDICAL INVOICE FORMS in various styles.

APPOINTMENT CARDS, VISITING CARDS, CHANGE-OF-ADDRESS CARDS, WEDDING and INVITATION CARDS. Newest Patterns.

NOTE PAPER, with Stamped (raised) Address, &c.

EMBOSSING PRESS, for stamping OWN paper with Address, Crest, &c.

SEAL ENGRAVING, DIE SINKING, RUBBER STAMPS, STENCIL PLATES, and Engraving of every description.

ARMORIAL BOOK-PLATES ("ex-libris") Designed and Engraved.

LIVERY BUTTONS, HARNESS CRESTS.

GOLD SIGNET RINGS and SEALS.

ILLUSTRATED PRICE LIST POST FREE.

CULLETON'S ENGRAVING OFFICE,
92 PICCADILLY, LONDON, opposite the Green Park (formerly 25, Cranbourne Street).

CULLETON'S HERALDIC OFFICE

For SEARCHES and AUTHENTIC INFORMATION respecting

ARMORIAL BEARINGS AND FAMILY DESCENTS.

ARMS and CRESTS Painted in Correct Heraldic Colours.

GENEALOGICAL CHARTS tabulated from Family Documents and Engrossed on Vellum.

INFORMATION respecting GRANTING of ARMS, CHANGE OF NAME, and HERALDIC COLOURS for SERVANTS' LIVERIES.

CULLETON'S HERALDIC OFFICE.
92, PICCADILLY, LONDON, opposite the Green Park (formerly 25, Cranbourne Street).

Dr. Martin's Pure Rubber Bandages

(Registered Trade Mark) for the Radical Cure of Varicose Veins, Ulcers, Eczema, and other Diseases of the leg (GENUINE) are by far superior to any of the numerous imitations.

No. 3 A, 6 feet by 2¼ inches, thin, for ankle,	price	3s. 6d.
,, 3 do. by do. stout, do.	,,	4s. 6d.
,, 1 B, 10½ feet by 3 inches, thin, for leg,	,,	5s. 6d.
,, 1 A, do. by do. stout, do.	,,	7s. 6d.
,, 8 14 feet by 3 inches, thin, for leg to above knee,	,,	7s. 6d.
,, 7 do. by do. stout, do.	,,	9s. 6d.
,, 9 B, 21 feet by 3 inches, thin, for leg and thigh,	,,	10s. 6d.
,, 9 A, do. by do. stout, do.	,,	13s. 6d.

CAUTION.—Please order the *Genuine* Martin's Bandages, each being stamped with Dr. Henry A. Martin's signature.

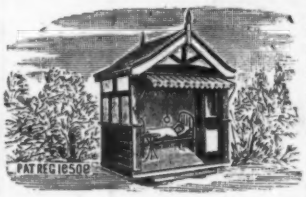
All others are spurious imitations.

Complete Price List also Dr. H. A. Martin's Pamphlet describing Method of Treatment post free on application to the Sole Agents—

KROHNE & SESEMAN, Surgical Instrument Makers, 37, Duke Street, Manchester Square, London.

PORTABLE BUILDING CO.,
35, MARKET ST., MANCHESTER.

THE LATEST SHELTER FOR THE OUT-DOOR TREATMENT OF CONSUMPTION.



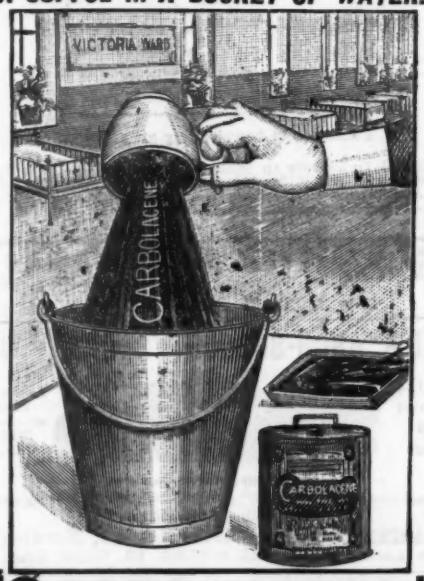
The building is constructed with an open front, which can, however, be closed by means of half glass folding doors, also a revolving turn-table, so that the patient can be turned away from the wind, a movable sun blind, and other features to add to the comfort of the patient.

Price £28 15s.,
Carriage paid, exclusive of internal fittings.

In addition to our being makers of the above Shelter we are also **manufacturers of Iron Hospitals and Wood and Iron Buildings for every purpose at home and abroad.**

Catalogues, special designs, and estimates free on application.

A CUPFUL IN A BUCKET OF WATER.



"CARBOLACENE"

The FIRST NON-POISONOUS SANITARY LIQUID SOAP

Produces, when used in the ordinary way with scrubbing-brush or flannel, a Splendid Foaming Lather, perfect for the thorough cleaning and purifying of anything or any place where it is used. It is a potent disinfectant, possessing all the disinfecting properties of Carbolic Acid, but differing from it in being non-poisonous. Just the thing for the sick-room, for washing patients, the Doctor's and Nurse's hands, and instruments, as well as the utensils and other vessels. The suds or spent wash are in themselves a good disinfectant.

"CARBOLACENE" has been adopted by H.M. Government; constantly used in Hospitals, Workhouses, and Institutions of all kinds.

WILL WASH CLOTHES.

SOLD IN DRUMS, 6d. and 1s. 3d. each. Gallon Drums, 3s. 6d. each. Larger quantities 2s. 6d. per gallon, carriage paid.

From all Chemists, Druggists, and Stores, or direct from

Messrs. W. & F. WALKER,
29, African House, 6, Water Street, LIVERPOOL.

AGENTS WANTED.

Telephone—
5023 GERRARD.

A. DAVIS & CO.,

10, STRAND, LONDON.

Telegraphic Address—
"SURCINGLE, LONDON."

Specialité :—**PROFESSIONAL HARNESS for Hard Wear,**

£10 complete,

For BROUGHAM WORK.

HORSE CLOTHING, STABLE UTENSILS, WHIPS of the Finest Quality, at the Lowest West End Prices.

ILLUSTRATED PRICE LISTS POST FREE UPON APPLICATION.

ONLY ADDRESS - - - 10, STRAND, LONDON.

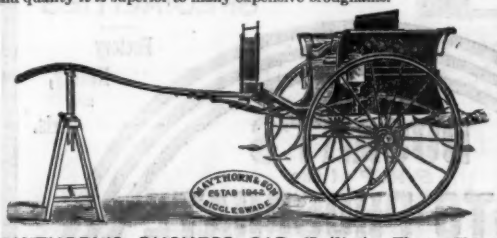
MAYTHORN & SON, BIGGLESWADE,

Builders of Carriages of every description, of HIGHEST QUALITY ONLY.

ESTABLISHED 1842.

MAYTHORN'S CELEBRATED MEDICAL COUPÉ

Is the best SINGLE BROUGHAM for a Doctor's use. It is specially light and closely coupled, so as to be well within the power of a small horse, and at the same time it is exceedingly roomy, comfortable and durable. It is the best value for money ever offered, its price being only 90 guineas cash, or three annual payments of £33 each, whilst in style and quality it is superior to many expensive broughams.



MAYTHORN'S DUCHESS CAR (Built in Three Sizes)

The shafts of this unique Car are successfully arranged in a special manner to be no obstacle to entrance to it, so that only one step is necessary even in those suitable for full-sized horses. Photo and full particulars on application. It is extremely comfortable, easy running, and a perfect Car in every respect.

MAYTHORN'S DOG-CART DE LUXE (Built in Two Sizes).

This is the most handsome and perfectly appointed panel-seated Dog-Cart extant, and runs and rides most easily. Can be had to suit any cob or horse and with or without indiarubber tyres.

Send for MAYTHORN & SON'S Price List, with lowest cash prices and terms for letting with option of purchase.

Miniature Single Brougham, by first-rate builder. Very light; latest design; handsomely finished, and only used few months. Must be sold; a bargain for cash. Apply, 67, George-street, Portman-square, W.

"Triano" Single Brougham.—W. EASTGATE, 21, Newman-street, W., solicits all intending purchasers of Broughams to kindly inspect his newly designed carriage, which gives accommodation for a third person and more aerial space without increase of weight or draught, and adding elegance to the appearance of the ordinary Single Brougham.

Aldridge's, St. Martin's-lane, London, W.C. (established 1753.)—SALES every Wednesday and Saturday. 200 Horses will be sold Bi-weekly, including Brougham and Phaeton Horses from Jobmasters, with Hacks, Hunters, Coach and Harness Horses, Cobs, Ponies, and Cart Horses from Noblemen, Gentlemen, and the Trade: also New and Secondhand Carriages, Harness, &c. Sales and Valuations in town and country. No dealing allowed on the part of anyone connected with the establishment. Telephone 36,102. Full Catalogue appears in "Morning Post" every Tuesday and Friday.—W. & S. FREEMAN, Proprietors.

INSURE YOUR HORSES & CATTLE

With the IMPERIAL ACCIDENT, LIVE STOCK AND GENERAL INSURANCE COMPANY, LIMITED.

Established 1878.

Head Offices: 17, PALL MALL EAST, LONDON, S.W.

Carriage, Saddle, Farm, and Trade Horses; Hunters, Stallions, and Infoal Mares Insured against Death from Accident or Disease.

CLAIMS PAID EXCEED £150,000.

Prospectuses and particulars post free.
Agents required.

B. S. RSSEX, Manager.

JOB HORSES,

HORSES and CARRIAGES

FOR ANY PERIOD, IN TOWN OR COUNTRY.

EXCEPTIONALLY LOW TERMS.

PARK HACKS. HUNTERS. CHARGERS.

THE ALBERT GATE RIDING ACADEMY,

JOB AND POST MASTERS,

Rutland Yard, KNIGHTSBRIDGE, S.W.

WM. WOOLLEY, MANAGER.

BY ROYAL LETTERS PATENT.

"GAMGEE TISSUE"

(Absorbent Gauze and Cotton Tissue).

Sole Proprietors and Manufacturers—

ROBINSON & SONS Limited, Chesterfield

WALL-PAPERS. Free from Arsenic.

Wm. WOOLLAMS & CO.,
ORIGINAL MAKERS,
Show-rooms—110, High-street, Marylebone, London, W. And of all Decorators.
TWENTY MEDALS.
CHICAGO EXHIBITION, HIGHEST AWARDS.

CONDY'S FLUID

DISINFECTS BY OXYGEN.
A POWERFUL GERMICIDE.
DESTROYS FOUL MATTERS AND ODOURS.
PURIFIES WATER AND AIR.
SICK ROOM COMFORT.
LEAVES NO SMELL.
GARGLE, INJECTION AND LOTION.

CONDY'S FLUID

Directions with the Bottle.

CRÊPE VELPEAU BANDAGES.

Registered.

The Only Original. Introduced by me 1892.
AN ELASTIC BANDAGE.
Containing no India-rubber. Superseding Elastic Stockings, Webs, Bandages, and at half the cost.
Three sizes. About 2, 2½, and 3 in. wide.

A CRÊPE VELPEAU ABDOMINAL BINDERS.

Useful after many Abdominal Operations, and for Ladies after confinements. Two sizes—8 and 11 in. wide.
CAUTION—Beware of fraudulent and useless imitations.

Wholesale of
W. GIMBER, Surgical Bandage & Instrument Maker,
6, HARDERS ROAD, PECKHAM, LONDON, S.E.,
And of all Wholesale Druggists, Chemists, Surgical Instrument Makers, &c.

CLOTH CASES FOR BINDING

THE HALF-YEARLY VOLUMES OF
"THE LANCET"
Can be obtained of any Bookseller, in town or country,
Price 2s. each, by post 2s. 3d.
Or from the Office, 423, Strand, London.

VIAL

MANUFACTURER OF MEDICAL AND PHARMACEUTICAL SPECIALITIES

Factory.
Neuilly,
nr.
Paris.

GRIMAULT'S CIGARETTES OF
CANNABIS INDICA
Relieve promptly asthma and other affections of the respiratory organs.

(Rigaud & Chapoteaut),
8, Rue Vivienne,
Paris.

MORRHUOL
An alcoholic extract of the active principles of cod liver oil in capsules. Readily assimilated—no nausea.

Morrhuol-Creasoté
capsules have the combined advantage of administering creasote and cod liver oil in a form which never irritates or disagrees.

SANTAL-MIDY
Capsules of Mysore sandal wood oil of absolutely reliable quality, freed from resin and other noxious impurities.

APIOLINE
The true active principle of parsley in capsules—a well known and most trustworthy emmenogogue.

DUSART'S
SYRUP of the
LACTO-PHOSPHATE
of LIME.

The most soluble and readily assimilable form of phosphate of lime for internal administration is the lacto-phosphate, this being the salt which is formed in the stomach by the action of the gastric juices upon the phosphates contained in the food, as a preliminary to absorption. It is therefore peculiarly adapted for the treatment of disorders of the digestion and nutrition in children, and as a reconstituent tonic in lymphatic and strumous subjects, especially those who display a tendency to, or manifestations of, diseased lungs or joints (rickets, white knee, enlarged glands, etc).

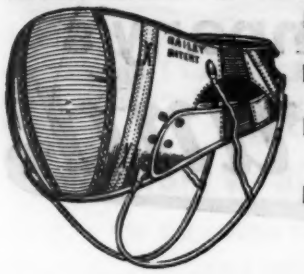
Dusart's Syrup with **Iron** is frequently found useful as an alternative medicine.

2/9 per bottle.

Samples Free to Medical Profession. Apply to

Agents:
Wilcox & Co.,
83, Mortimer St.,
London, W.

BAILEY'S PATENT ABDOMINAL BELTS.



No. 1.—FOR GENERAL SUPPORT. 45/-, 35/-, 25/-, 18/-.
"Cannot shift or rock up."—THE LANCET.

No. 2.—FOR PREGNANCY. 45/-, 35/-, 25/-, 18/-.
Capable of great Expansion. Lacing front.

No. 3.—FOR PROLAPSUS UTERI. 50/-, 40/-, 30/-, 25/-.
With Improved Indiarubber Perineal Pad and Regulating Straps. "Easy and perfect support."—BRITISH MEDICAL JOURNAL.

No. 4.—FOR UMBILICAL HERNIA. 50/-, 40/-, 30/-, 23/6.
These Belts afford perfect General Support to the Abdominal Parietes, and can be fitted with any kind of Pad suitable to the hernial aperture, or with Hollow Pads in cases of Irreducible Hernia.

Subject to the usual discount.

BAILEY'S SPECIAL CLINICAL THERMOMETERS.

REDUCED PRICES.

Guaranteed all English made. *Special Prices by the dozen. Postage 2d.*

	s.	d.		s.	d.
No. 0. "Hospital"	2	0	No. 9. "Hospital," magnifying	3	0
No. 1. "60 Seconds"	3	0	No. 10. "60 Seconds," magnifying	4	0
No. 6. "30 Seconds"	3	6	No. 11. "30 Seconds," magnifying	6	0

Makers of all kinds of Surgeons' Instruments and Appliances, Invalids' Requisites, &c.

W. H. BAILEY & SON, 38, Oxford Street, London, W.

Telephone No. 2942, Gerrard. Telegram:—"BAYLEAF, LONDON."

BRADY & MARTIN.

Established in 1855 by the late Henry Bowman Brady, F.R.S., LL.D.

Present Partners:

N. H. Martin, Pharmacist.

C. E. Stuart, B.Sc. Pharmacist.

W. Martin, M.D.

SPECIAL PREPARATIONS.

EXTRACT MALTI CUM PETROLEO (BRADY).

This is a scientific combination of the finest Malt Extract with Purified Petroleum and has been much commended as an antiseptic, stimulant, and nutrient in tubercular phthisis, bronchitis, &c., and in all wasting diseases in children. In bottles, 2s. 6d. each; 24s. per doz.

LIQUOR BISMUTHI CO. c PEPSINA.

Rich in Pepsine and Bismuth and pronounced by all who use it the BEST preparation on the market. Price 3s. 6d. per lb.; W. Qts., 3s.; Gal., 7s. 6d.; 6 W. Qts., 7s. per lb. Carriage paid to any part of Great Britain.

LIQUOR CERII (B. & M.).

Since we first introduced it in 1888 this has steadily grown in favour with medical men. Numerous private communications have testified to its value as a gastric sedative in various disorders of the stomach—e.g., Chronic Irritative Dyspepsia, Ulcer, Cancer; and the vomiting of pregnancy has often been found to yield to it when other remedies have failed. In bottles, 2s. 6d., 4s., and 7s. 6d. each.

TINCTURA OPII PURIFICATA.

A purely sedative and hypnotic preparation of full strength and free from narcotine and fetid resin. This is the original preparation made strictly according to the instructions of the authors, HENRY DRAKE, F.L.S., and HENRY B. BRADY, F.R.S. It possesses to the full the virtues of opium without producing the constipation, nausea, headache, and furred tongue which so frequently follow the use of the ordinary tincture. Price 8s. per lb.; W. Qts., 7s. per lb. Post or carriage free. Samples free on application.

NORTHUMBERLAND ROAD, NEWCASTLE-ON-TYNE.

Drugs: The high quality of drugs and preparations is assured by analysis and strict supervision of every stage of manufacture.

Instruments: All instruments are carefully examined and approved before being despatched.

THE

Aylesbury Dairy Company's

Life Belt Brand,

PREPARATIONS OF MILK

FOR

INFANTS and INVALIDS.

SEVEN SILVER MEDALS AND OTHER HIGHEST AWARDS.

HUMANIZED MILK.

PEPTONIZED MILK.

WHEY.

STERILIZED MILK.

STERILIZED CREAM.

&c., &c., &c.

Beware of Spurious Imitations.

HUMANIZED MILK,

The only Genuine is supplied in glass bottles only, bearing the Aylesbury Dairy Company's Registered Trade Mark of a LIFE BELT and also the words

Life Belt Brand,

Can only be obtained at the Company's

Chief Office: 31, ST. PETERSBURGH PLACE, BAYSWATER, LONDON, W.

AND BRANCHES.

N.B.—The Company have no Agents, and the Public are cautioned against Imitations.

SAMPLE CASES SENT FREE OF CHARGE TO MEMBERS OF THE MEDICAL PROFESSION ONLY.

Telegraphic Address, "AYLESBURY COMPANY, LONDON."

Telephone No. "533 Paddington."

"FRAME FOOD" DIET

is made

SPECIALLY NOURISHING

by the addition to it of the

SOLUBLE PHOSPHATES, ALBUMINOIDS

and other NUTRITIOUS matter

Extracted from WHEAT BRAN:

In process of manufacture, by the diastatic action of this Extract, the starchy matter is converted and the Diet rendered exceptionally suitable for the weak digestive powers of

INFANTS and INVALIDS.

Sold in Tins, 1 lb. at 1s.; 4 lb., at 3s. 9d.

THE LANCET says:—

"The enrichment of cereal food with the soluble Phosphate, which is otherwise thrown away in the bran, is a process worthy of all commendation. ..... The 'Frame Food' Company manufacture a preparation called 'Frame Food' Diet, in which the presence of a constant quantity of soluble Phosphate derived from the bran may be relied upon."

The HOSPITAL says:—

"'Frame Food' Diet is already too well known to require detailed notice. We are prepared, however, to impart to it the 'hall mark' of our approval as a highly valuable food for Invalids and Young Children. Containing, as it does, a rich proportion of albuminoids and carbohydrates in a readily assimilable form, in addition to an unusually high percentage of phosphates, it is at once a food and a therapeutic agent. In its latter capacity it should be particularly useful in cases of rickets and deficient nerve energy."

Mr. ALF. W. STOKES, F.C.S., F.I.C., Public Analyst to Paddington, &c., in his Analytical Report on "FRAME FOOD" DIET, says:—

"I am of opinion that this is a prepared food of high dietetic value. Its richness in Albuminoids and Phosphates, and its readiness of easy assimilation, render it a valuable addition to our scanty stock of foods especially fitted for the use of children and invalids, and of infants of delicate digestion."

"FRAME FOOD" JELLY

Is made of the

SOLUBLE PHOSPHATES, ALBUMINOIDS,

and other NUTRITIOUS MATTER,

Extracted from WHEAT BRAN.

It possesses the

NOURISHING & DIGESTIVE

properties of

MALT EXTRACT;

and is as

DELICIOUS as JAM.

Sold in Air-tight Covered Jars'

Containing 1 lb. at 9d.

The HOSPITAL, Dec. 18th, 1897, says:—

"This jelly is a new and modified form of the well-known Frame Food Extract. It is specially designed to meet the requirements of the nursery and convalescents. It may be taken alone or spread on bread, and is sufficiently pleasant to the palate to be regarded almost in the light of a condiment, and in our experience children take very kindly to it. The Jelly is a compound of 'Frame Food' extract and sugar, and containing as it does a large percentage of organic phosphates and albuminoids, it must be regarded as a food largely endowed with the elements which go to build up and repair the tissues of the body. In itself it is highly digestible, but further than this, it is calculated to assist rather than hinder the digestion of other foods taken at the same time."

Mr. ALF. W. STOKES, F.C.S., F.I.C., Public Analyst to Paddington, &c., &c., in his report says:—

"'Frame Food' Jelly is an exceedingly wholesome and nutritious article of food. ..... Containing a digestive principle known as diastase, it acts upon other foods, making them more easy of digestion."

FREE TEST.

A 1-lb. Tin of **"FRAME FOOD" DIET** *and a 1-lb Jar* **"FRAME FOOD" JELLY** *sent free, with Analytical Reports, &c., to any MEDICAL MAN (enclosing his card) who desires to put the above statements to a practical test.*

FRAME FOOD CO., Ltd., Lombard Road, Battersea, LONDON, S.W.

"THE LANCET" on

VAN HOUTEN'S COCOA,

JULY 3rd, 1897.

"In a recent analysis
" which we have made, the results
" distinctly indicate the advantage of
" VAN HOUTEN'S PROCESS of manu-
" facture. Thus this Cocoa yields
" a decoction containing a maximum
" proportion of the valuable food con-
" stituents of the bean, and what is
" of more importance still, these are
" presented in a condition more easy
" of assimilation and digestion than in
" Cocoa not so prepared."

Pepsencia.

PEPSENCIA is an ever-ready digestive fluid, containing all the soluble constituents of the gastric juice, preserved in an agreeable aromatic menstruum. It represents both the peptic and milk curdling ferments obtained directly from the fresh peptic glands.

FAIRCHILD BROTHERS & FOSTER.
TRADE PEPSENCIA MARK
PEPSENCIA is obtained by direct solution from the secreting glands of the gastric mucous membrane, every care being taken to preserve the physiological activity of the digestive principles.
This Digestive Essence possesses remarkable activity and is vastly superior to the usual liquid pepsin, which often contain but the merest trace of the true digestive ferment. Pepsencia is a powerful digestive. It exhibits, in a remarkable degree, the coagulating power upon milk, which has been shown by physiologists to be characteristic of the gastric juice.
One fluid dram (a teaspoonful) will curdle two pints of milk, at 100° Fah. in a few minutes.
The important service an efficient preparation of pepsin is capable of rendering is well acknowledged, and the superiority of Pepsencia has made it the most used and the most valued by the medical profession. By the aid of Pepsencia the physician is enabled to regulate the diet and the nutrition of his patients, even in cases where dieting is most difficult owing to loss of digestive power.
Pepsencia is most convenient and reliable for making junket and whey, so highly esteemed as foods and delicacies for the sick.
A teaspoonful of Pepsencia just before or after food will be found to aid digestion and assimilation, at any time when the digestive process is slow.
MADE BY
FAIRCHILD BROS. & FOSTER,
IN
NEW YORK, U. S. A.
Agents for Europe, Asia, Africa and Australia
BURROUGHS, WELLCOME & CO.,
Snow Hill Buildings, LONDON, E. C.

PEPSENCIA contains *pure pepsin*, the vitality of which is unimpaired by chemical action or manipulation, as it is obtained by direct solution from the secreting glands of the gastric mucous membrane, every care being exercised to preserve its full physiological activity.

PEPSENCIA is acceptable to the most delicate and fastidious patient, while it excels all other allied preparations in activity and utility.

One teaspoonful before or after a meal will be found of service in all cases where pepsin is indicated.

Supplied to the Medical Profession in 4 oz. and 8 oz. bottles, at 1s. 9d. and 3s. each.

Specimen and Literature will be forwarded on request.

Originated and Manufactured by
Fairchild Bros. & Foster,
NEW YORK.

Agents for Europe, Asia, Africa, and Australasia:
Burroughs, Wellcome & Co.,
LONDON and SYDNEY.

BETA-EUCAINE *versus* COCAINE.

Why use Cocaine when BETA-EUCAINE is Far Preferable?

Beta-Eucaine is identical with Cocaine in anæsthetic action, but possesses the following important *advantages* therapeutically, pharmaceutically, and economically over Cocaine.

Beta-Eucaine has only one-fourth of the toxicity of Cocaine.

Beta-Eucaine has no unpleasant by-effects.

Beta-Eucaine is more constant in action.

Beta-Eucaine, unlike Cocaine, does not decompose on boiling.

Beta-Eucaine solutions can thus be rendered permanently sterile.

Beta-Eucaine solutions, unlike Cocaine solutions, can be kept for indefinite periods.

BEFORE ALL—

Beta-Eucaine is LESS than HALF the Price of Cocaine.

Reference to some of the Medical Literature on Eucaine.

"Eucaine Hydrochlorate as a Local Anæsthetic."—THE MEDICAL AND SURGICAL REPORTER, *November 28th, 1896.*

"Eucaine as a Local Anæsthetic in the Surgery of the Throat, Nose, and Ear."—BRITISH MEDICAL JOURNAL, *January 16th, 1897.*

"Beta-Eucaine in Practical Ophthalmology."—DEUTSCHE MEDICINISCHE WOCHENSCHRIFT, *February 4th, 1897.*

"Beta-Eucaine. A Further Note on New Local Anæsthetics."—BUFFALO MED. JOUR., *June, 1897.*

"Eucaine as a Local Anæsthetic when used Hypodermically."—ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *August, 1897.*

"Beta-Eucaine as a Local Anæsthetic in Surgery."—THERAPEUTISCHE MONATSHEFTE, *No. 8, August, 1897, p. 427.*

"Eucaine."—MEDICAL ARENA, *September, 1897.*

"Eucaine as a Local Anæsthetic in the Surgery of the Throat, Nose, and Ear."—*Read at the 65th Annual Meeting of the British Medical Association, and published in the* BRITISH MEDICAL JOURNAL, *November, 1897.*

"Local Infiltration Analgesia."—*An Address delivered at University College Hospital, and published in* THE LANCET, *February 4th, 1899.*

"Beta-Eucaine as a Local Anæsthetic."—THE LANCET, *August 26th, 1899.*

"Relative Toxicity of Cocaine and Eucaine."—*Presented to the Section on Stomatology at the Fiftieth Annual Meeting of the American Medical Association, June 6th, 1899.*

We have purposely omitted the names of the Authors of these various communications, considering that it might be contrary to medical etiquette to have included them.

For full particulars, &c., apply to

A. & M. ZIMMERMANN,

9 & 10, ST. MARY-AT-HILL, LONDON, E.C.

THYROGLANDIN
(STANFORD).

DOSE: 1 to 5 grains.
Should not be taken except under Medical Advice, being four times the strength of the Fresh Gland.

Prepared according to the Patented Process of E. C. C. STANFORD, F.I.C., F.C.S., only by

EVANS, SONS & CO., LIVERPOOL.

London: EVANS, LESCHER & WEBB. Canada & United States: EVANS & SONS, Ld., Montreal.

THYROGLANDIN contains all the active principles of the Thyroid Gland of the Sheep, and is four times the strength of the Fresh Glands. It is prepared by the patented process of E. C. C. STANFORD, F.I.C., F.C.S., from Glands received fresh daily, which are treated at once, before any putrefaction can take place, all the adhering fat, &c., being carefully removed, and only the perfectly healthy Glands being used, for obtaining which we have special facilities from the fact that Liverpool is the principal meat market in the United Kingdom.

In addition to the above, we now supply in the form of 1 grain coated Pilules.

EVANS, SONS & CO.,
Sole Manufacturers.

N.B.—Pamphlets on the Treatment of Obesity and Myxœdema by above New Preparation of Thyroid can be supplied gratis for distribution amongst members of the Medical Profession on application.

CASCĀRA-HAWLEY.

THE BEST REMEDY FOR HABITUAL CONSTIPATION AND TORPID LIVER.

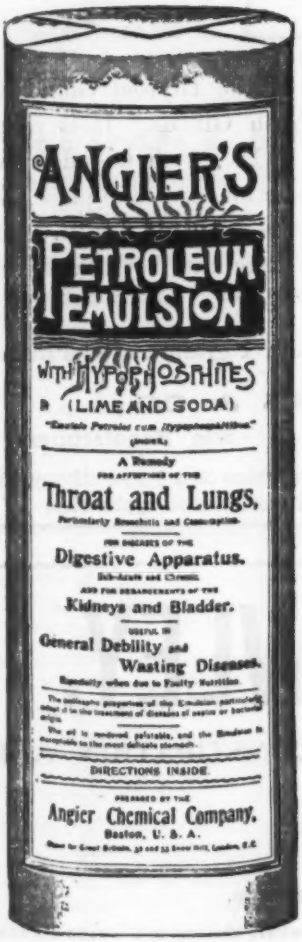
CASCĀRA SAGRADA has long been recognised as a most valuable Tonic Laxative of great benefit in Dyspeptic and Habitual Constipation, and where the use of Purgatives has done harm.

The objection a patient has to this drug is its extremely bitter taste; this we have obviated in CASCĀRA-HAWLEY. It consists of concentrated Fluid Extract of Cascara in Tasteless Gelatine Capsules. Each Capsule is equivalent to half a teaspoonful of the fluid Extract of the British Pharmacopœia. From its safe and mild action, without griping, CASCĀRA-HAWLEY is a great boon to Ladies and Children. One of these Capsules acts as mildly and efficiently as castor oil without its taste—so repulsive to children. Biliousness and headaches arising from a defective state of the bile generally yield to this medicine; it acts as a tonic in exciting to better action the Stomach, Liver, and Intestines.

We shall be pleased to send a box *free* to any member of the Medical Profession. We are sure a trial of CASCĀRA-HAWLEY will show that it is the best way of prescribing Cascara Sagrada.

EVANS, LESCHER & WEBB, 60, BARTHOLOMEW CLOSE, LONDON.

Winter Coughs.



December begins and January swells the usual epidemic of Coughs and Colds, with thousands of cases slow to respond to ordinary treatment. We want to emphasize the great value of Petroleum at the very beginning of Throat and Lung troubles, results being quick and decisive in almost every instance.

Petroleum has a remarkably soothing and healing effect upon all inflamed mucous surfaces, and the best form of administration is

ANGIER'S PETROLEUM EMULSION.

We say so because Physicians say so, and because Physicians keep on saying so. Clinical reports show most surprising results.

In nothing is the usefulness of our Emulsion more promptly shown than in the treatment of Coughs and Bronchial troubles; and it is so pleasant to the taste that even the most fastidious will not object to taking it.

FREE SAMPLES TO THE MEDICAL PROFESSION.

☞ **CAUTION.**—When prescribing be careful to specify ANGIER'S Emulsion; otherwise some disappointing imitations made with ordinary petroleum may be substituted.

THE ANGIER CHEMICAL CO., LTD.

31 & 32, SNOW HILL, LONDON, E.C.

WE TEST PHYSIOLOGICALLY

ERGOT, CANNABIS INDICA,
DIGITALIS, STROPHANTHUS.

and other toxic and narcotic drugs. If you want to use RELIABLE preparations of these drugs which are submitted to careful physiological tests before leaving the laboratory, prescribe our Fluid Extracts [distinctly specifying P., D. & Co.], and you will get them.

Another Reason Why You Should Specify P., D. & Co.

Samples representing over 30,000 pounds of Cannabis Indica, and 20,000 pounds of Ergot were rejected by us during the past twelve months—condemned by our Pharmacological Laboratory on the cogent ground of defective activity, or complete inertness.

Rejected By Us, What Became of Them?

The only possible means of making trustworthy assays of many powerful drugs is by physiological tests, and these we make in our Pharmacological Laboratory.

PARKE, DAVIS & Co.,
21, North Audley Street, LONDON, W.

BAYER'S PHARMACEUTICAL SPECIALITIES.

A SPECIFIC FOR INFLUENZA. A perfect substitute for Salicylate of Sodium, as it acts quite as promptly, but without producing any of the unpleasant after-effects so frequently attending the use of this drug. Its action is sure and quick.

SALOPHEN
(Acetyl para Amido-salol).

ABSOLUTELY non-toxic. Specially indicated in Acute Articular Rheumatism, Sciatica, Chorea, Migraine, and Neuralgia.

Dose.—16 grains 3 or 4 times a day, in powder or in the form of lozenges.

A NEW silver preparation, highly efficacious in the **treatment of Gonorrhœa** (acute: injections of ¼ to 2%; chronic: up to 10%).

PROTARGOL contains 8·3% of silver, easily soluble in cold or warm water, is **non-irritating**, and possesses a better penetrating effect on the tissues than any other known silver preparation.

PROTARGOL.

PROTARGOL has been used with the greatest success in **Ocular Therapeutics**, in solution of 5 to 20%; and in **Rhino-Laryngology** (brushing with solutions of 5 to 10%). It has also been highly recommended as a **prophylactic against Gonorrhœa** (instillations of 20 parts Protargol, 10 parts Glycerine, mixed with 70 parts Water).

AN ideal substitute for the Salicylates, having no irritating effect on the stomach, through which it passes unchanged, decomposing only in the alkaline intestinal fluid. It is free from the unpleasant after effects so frequently attending the use of Salicylic Acid and its salts.

ASPIRIN
(Acetic Ether of Salicylic Acid).

IT has an agreeable, slightly acid taste, favourably contrasting with the repugnant sweet taste of the Salicylates. Extensive clinical trials have proved the value of Aspirin as a perfect substitute for Salicylic Acid and its salts.

Dose.—16 grains three or four times a day.

AN excellent substitute for Codeine. In doses of 1-12th of a grain Heroin has given most excellent results in cases of Bronchitis, Pharyngitis, Catarrh of the Lungs, and in Asthma Bronchiale. In the latter two cases the dose may be increased to 1-8th of a grain.

HEROIN
(Di-acetic Ether of Morphine).

HEROIN does not cause constipation, and may be administered to patients with a weak heart who cannot tolerate Morphine.

Hydrochloride of Heroin. A neutral Heroin salt, easily soluble in water, and suitable for subcutaneous injection.

Dose. — Subcutaneously, 1-20th to 1-6th of a grain.

TRIONAL, IODOTHYRIN, SALOPHEN, LYCETOL, CREOSOTAL, DUOTAL, HEROIN, ARISTOL, TETRONAL, ANALGEN, LOSOPHAN, EUROPHEN, SOMATOSE, IRON SOMATOSE, MILK SOMATOSE, PHENACETINE-BAYER, SULFONAL-BAYER, PIPERAZINE-BAYER, SALOL-BAYER.

Samples and Literature may be had on application to the Wholesale Depôt for all Bayer's Pharmaceutical Specialities,

The BAYER CO., LTD., 19, St. Dunstan's Hill, London, E.C.

Also at 20, Booth St., Morley St. Manchester; 42, Bothwell St., Glasgow; & 48, Vicar Lane, Bradford.

AWARDS.

GOLD MEDAL, International Health Exhibition, London, 1884.
FIRST ORDER OF MERIT AND MEDAL (Highest Award), Adelaide, 1887.
HIGHEST AWARD, Medical and Sanitary Exhibition, London, 1882.
FIRST ORDER OF MERIT AND MEDAL, Melbourne, 1888.

Liquor Pancreaticus (Benger).

For the preparation of peptonised or partially digested Milk and other articles of food.

Simple directions for use enclosed. In 4 oz., 8 oz., and 16 oz. Bottles.

The *British Medical Journal*, in an article on Benger's Preparations, says:—"Time and use have justified the claims put forward for these preparations."

The *London Medical Record* says: "These are undoubtedly a great advance on any previous attempt in this direction. . . . The introduction of these preparations is a distinct advance in therapeutics."

The *Medical Times and Gazette* says:—"Benger's Preparations have deservedly a very high reputation, and are all largely used."

Liquor Pepticus (Benger).

An exceedingly active fluid pepsine, without disagreeable taste.

DOSE. — One or two teaspoonfuls with meals. In 4 oz., 8 oz., and 16 oz. Bottles.

Benger's Peptonised Beef Jelly.

A delicious quick restorative for Invalids and the Aged. In patent glass jars, no metallic contamination possible. Retail, 2s. each.

The Lancet says:—"It is a most valuable form of concentrated food."

The *London Medical Record* says:—"Invaluable for old people; also in convalescence from acute diseases."

A Physician writes:—"I feel I cannot express my gratitude to you sufficiently, as your Beef Jelly is the only thing my niece can retain, and it has certainly kept her alive for the last week."

Benger's Peptonised Chicken Jelly.

In similar glass jars. Retail, 2s. each.

The Lancet says:—"Mr. Benger's Preparations are now so well known that all we need say of the sample before us is—that it is excellent. It has a delicate chicken flavour."

The *Medical Press* says:—Few modern improvements in pharmacy have done so much as Benger's Preparations to assist the physician in the treatment of the sick."

Benger's Preparations may be obtained through all Retail and Wholesale Houses and Shippers, or of the Manufacturers—

F. B. BENGER & CO., LTD., Otter Works, Manchester.

TELEGRAPHIC ADDRESS—"Benger's, Manchester."

VIN MARIANI

(MARIANI WINE.)

More than 8000 physicians have certified to the immense sustaining, recuperative, and nourishing properties of this wine, which is indicated in cases of

OVER-EXERTION.
NEURASTHENIA,
NERVOUS DEPRESSION,
SLEEPLESSNESS,
NERVOUS DEBILITY,
CONVALESCENCE,
VOCAL FATIGUE.

Purchasers should insist on getting Mariani Wine and accept no substitute.

Price 4s. per bottle; or 12s. per dozen.

Sample bottles free to the Medical Profession.

CRYSTALLIZED DIGITALINE Nativelle.

The Paris Academy of Medicine awarded a prize of 6000 francs to M. Nativelle for the discovery of CRYSTALLISED Digitaline.

CRYSTALLISED DIGITALINE (NATIVELLE) is a definite substance that can always be relied on and administered with exactitude. After a few doses the pulsations of the heart become slower, more regular, and more energetic.

Prepared in Bottles of 50 granules, each granule containing a 250th grain (½-milligramme). A Sample, with Opinions of the Press and Medical Profession, free by post from WILCOX & CO., 32, Mortimer-street, London.

CIGARES DE JOY

ASTHMA
CHRONIC BRONCHITIS

One of these Cigarettes gives IMMEDIATE RELIEF in cases of ASTHMA, CHRONIC BRONCHITIS, HAY FEVER, COUGH, and SHORTNESS OF BREATH, and their daily use effects a COMPLETE CURE. The contraction of the air tubes, which causes tightness of chest and difficulty of breathing, is at once lessened by inhaling the medicated smoke of the Cigarette; a free expectoration ensues, and the breathing organs resume their natural action. Persons who suffer at night with COUGHING, PHLEGM, and SHORT BREATH find them invaluable, as they instantly check the spasm, promote sleep, and allow the patient to pass a good night.

Price 2s. 6d. per box of 25 Cigarettes, from WILCOX & CO., 32, Mortimer-street, London, W.

Sample boxes free to the Medical Profession.

WILCOX & CO.'S DESICCATED EXTRACT OF MALT

A Concentrated, Nutritive, and Digestive Food for INVALIDS and CHILDREN.

This preparation embodies all the beneficial properties of the most carefully prepared semi-fluid extracts, and possesses the additional advantages of greater richness in DIASTASE and the impossibility of fermentation. This powder may be eaten between bread-and-butter or dissolved in liquid, and, being a natural solvent of farinaceous material, it is strongly recommended as an adjunct to Children's Food and for ladies whilst nursing.

Prepared only by WILCOX & CO., 32, Mortimer-street, London, and put up in large bottles at 2s. 6d. each. Messrs. W. & Co., will be pleased to forward a sample to any of the Medical Profession.

„FRANZ JOSEF"

IS THE ONLY PALATABLE NATURAL APERIENT WATER.

It is owing to its constant uniformity in composition, its prompt and certain action, not followed by after griping or discomfort, and the absence of disagreeable taste, that **FRANZ JOSEF WATER has been received with such approbation and recommended so freely by many distinguished Physicians** both on the Continent and in Great Britain.

SAMPLE FREE
from Agents—
WILCOX & CO.,
32, Mortimer St., London, W.

It is the strongest of the Natural Aperient Waters, and therefore a smaller dose is needed to produce the desired effect.

Head Office—
BUDAPEST.

The "Allenburys" TRADE MARK. A.D. 1715.

Throat Pastilles.

SOFT. DEMULCENT. PALATABLE.

THESE PASTILLES have now for many years been employed by the Faculty in the relief of Throat Affections. Their form enables them to be more easily sucked than the ordinary hard lozenge; while the Pâte de Jujube from which they are manufactured is particularly palatable, soluble, and demulcent in its action.

Owing to the accumulated prescriptions and suggestions of Physicians and Specialists on the throat, ALLEN & HANBURYS are enabled to manufacture upwards of fifty varieties to meet various morbid conditions. Each variety has a specified number in the List, where the prescriptions are quoted in full. The following are examples of the Pastilles in very general use.

In prescribing it is only necessary to add the letters A. & H., these being registered as a Trade Mark; thus—Tannin Pastilles A. & H.

No. 9. Menthol, Cocaine, and Red Gum. *Menthol et Cocainæ, aa. gr. 1/10; Gummi Rubri, gr. ii.*
Antiseptic, Sedative, and Astringent.

" 11. Chlorate of Potash. *1 grain in each.*
Better than the B.P. form.

" 27. Compound Eucalyptus.
(Red Gum, Chlorate of Potash, and Cubebs). A valuable astringent.

" 29. Compound Rhatany and Cocaine. *Ext. of Rhatany grain 2, Cocaine Hydrochlor. grain 1/10th.*
A very efficacious astringent and anodyne

" 38. Cocaine, Chlorate of Potash, and Borax.
Especially useful for the tickling of a slightly relaxed throat.

" 44. Menthol and Cocaine. *1/10th of a grain of each in a Pastille.*
The antiseptic and stimulating action of the Menthol, combined with an effective Anodyne.

" 45. Menthol & Rhatany. *1/10 of a grain of Menthol in a Pastille.*
Stimulating, antiseptic, and mildly astringent.

" 46. Tannin, Cayenne, and Black Currant.
Is far more palatable and efficacious than the ordinary lozenge.

MANUFACTURED BY

Allen & Hanburys Ltd., Plough Court, Lombard Street, London.

A 1/- box of any variety, with detailed list, FREE to Medical Men in Great Britain.

A PROFESSIONAL OPINION.

BROMO SODA.—My attention has been called to your recent preparation entitled "Bromo Soda." It was, I believe, first prepared by you partly at my suggestion. It consists of the Bromide of Sodium and the Hydrobromate of Caffeine, in the proportion of thirty to one. It is designated, as I understand, not only to allay nervousness, but by means of the combination of the Caffeine with the Bromide to counteract the depressing effect of the latter. I have carefully considered the separate and combined effects of these drugs, and can, as I do, heartily commend the preparation you have made and offer for the use of the medical profession. After a long and careful experience with the various Bromides in the treatment of those affections of the nervous system that embrace unhealthily exalted reflex excitability, and in general nervousness, I have arrived firmly at the conclusion that the Bromide of Sodium is as valuable as any member of its class *as a Bromide*, and is greatly preferred, as compared with the Bromide of Potassium, on account of the greater toxic or poisonous effect of Potassium salts upon the human organism, as compared with those in which sodium is the base. In the vast majority of cases in which the Bromides are used the vigour of nutrition is lowered. It is, therefore, a matter of very considerable consequence to select that particular member of this important group of therapeutic agents which, while it secures the depressing or quieting effect desired, nevertheless exercises in the way of pernicious influence the least on the vigor of nutrition, or in other words the reparative power of the body. I am thoroughly clear in my mind that the Bromide of Sodium should be substituted for the more commonly, and as I may say almost universally, employed Bromide of Potassium. I feel so strongly in this matter that I am more than willing to make this the occasion for stating clearly and at length my views, with the hope that for the benefit of the vast mass of nervous invalids, for whom these agents are prescribed, they may have the slight but decisive advantage that will result from the proposed change. If you shall be able to exert a favourable influence in effecting this through the manifold channels at your disposal, the change I feel certain ought to be made, you will confer a boon of no small degree upon nervous invalids.

Most respectfully yours,

To Messrs. WM. R. WARNER & Co. J. S. JEWELL, M.D.

Facsimile, reduced.

EFFERVESCING
BROMO SODA.

Containing Caffeine, 1 gr., Bromide Soda, 30 gr.

It is claimed by prominent specialists in nervous diseases that the Bromide Sodium is more acceptable to the stomach than the Bromide Potassium. An almost certain relief is obtained by the administration of this Effervescing Salt. It is used with advantage in the *depression* following alcoholic and other excesses, &c. It affords speedy relief in *mental and physical exhaustion*. **Per Bottle, 3s. 6d.**

TO PHYSICIANS ONLY.
ELIXIR SALICYLIC COMP.

(CHAS. W. B., M.D.)

This preparation combines, in a pleasant and permanent form, in each fluid drachm, the following:

℞ Acid. Salicylic. (Schering's), gram. 0·32 Potass. Iodid. gram. 0·09
Cimicifuga, ... gram. 0·10 Tr. Gelsemium, ... 0·06

Indicated in RHEUMATISM, GOUT, LUMBAGO, &c.

This preparation is especially valuable for rheumatic diathesis and in the treatment of acute inflammatory, subacute, and chronic rheumatism, any of which will yield to tablespoonful doses every three or four hours, until four doses are taken; then a dessertspoonful at a time and finally decreased to a teaspoonful every three or four hours.

In acute inflammatory rheumatism, experience has proved that two tablespoonfuls administered every four hours, until a slight ringing in the ears follows, the dose then decreased to a tablespoonful every three or four hours, will produce the desired effects. The advantages of Elixir Salicylic Comp. are afforded by the combinations of Salicylic Acid with Soda in excess; thus forming a salt *less corrosive and irritating*, and more readily borne by the stomach. The other ingredients possess advantages well known to the Profession, to whom alone this preparation is introduced. We therefore suggest the propriety of specifying "Warner & Co." and ordering in f ℥ xii quantities, to obtain original bottles. It is a matter of great satisfaction to us to be able to place before the Profession a remedy so effectual in the cure of one of our most stubborn classes of disease.

ELIXIR SALICYLIC COMP. IS PUT UP IN 12 OZ. SQUARE BOTTLES, WITH PRESCRIPTION LABEL, ON WHICH THE PHYSICIAN'S DIRECTIONS MAY BE WRITTEN. DISPENSED BY CHEMISTS GENERALLY. **Per Bottle, 4s.**

PREPARED BY WILLIAM R. WARNER & CO., CHEMISTS.

SUPERIOR TO PEPSIN OF THE HOG.

INGLUVIN.

FROM THE VENTRICULUS CALLOSUS GALLINACEOUS.

A POWDER:—PRESCRIBED IN THE SAME MANNER, DOSES, AND COMBINATIONS AS PEPSIN.

A most potent and reliable remedy for the Cure of **Marasmus, Cholera Infantum, Indigestion, Dyspepsia, and Sick Stomach.** It is superior to the Pepsin preparations, since it acts with more certainty, and the effect cures where they fail.

A SPECIFIC FOR VOMITING IN PREGNANCY.

In Doses of 10 to 20 grs., also in Compressed doses of 5 grs. Per Bottle in either form, 4s.

Prescribed by the most eminent Physicians in Europe and America.

To Messrs. Warner & Co. 139, Camden-road, London, N.W.

GENTLEMEN,—I find your Ingluvin excellent for vomiting of pregnancy—in fact, the best preparation for that troublesome complaint.—Faithfully yours, H. VALENTINE KNAGGS, L.R.C.P., L.M., M.R.C.S., L.S.A., F.Z.S.

WARNER & Co.'s Ingluvin, Parvules, Soluble-coated Pills, and other Preparations may be obtained of the following, in addition to many others:—Grattan & Co., Belfast; Duncan & Flockhart, and Raimes & Co., Edinburgh; Evans, Sons & Co., Symes & Co., and J. Thompson, Limited, Liverpool; T. R. Lester, Cork; McMaster & Co., Dublin; Jewsbury and Brown, Manchester; O. R. Dawson, Southampton; Lofthouse & Saltmer, Hull; Davidson & Kay, Aberdeen; New Apothecaries Co., Glasgow; also in London, of Messrs. Barclay & Sons, Butler & Crispe, W. Edwards & Son, Lynch & Co., R. Hovenden & Sons, S. Maw, Son & Thompson, May, Roberts & Co., J. Sanger & Sons, W. Sutton & Co., Corbyn & Co., &c.

SOLE DEPOT IN GREAT BRITAIN—

F. NEWBERY & SONS

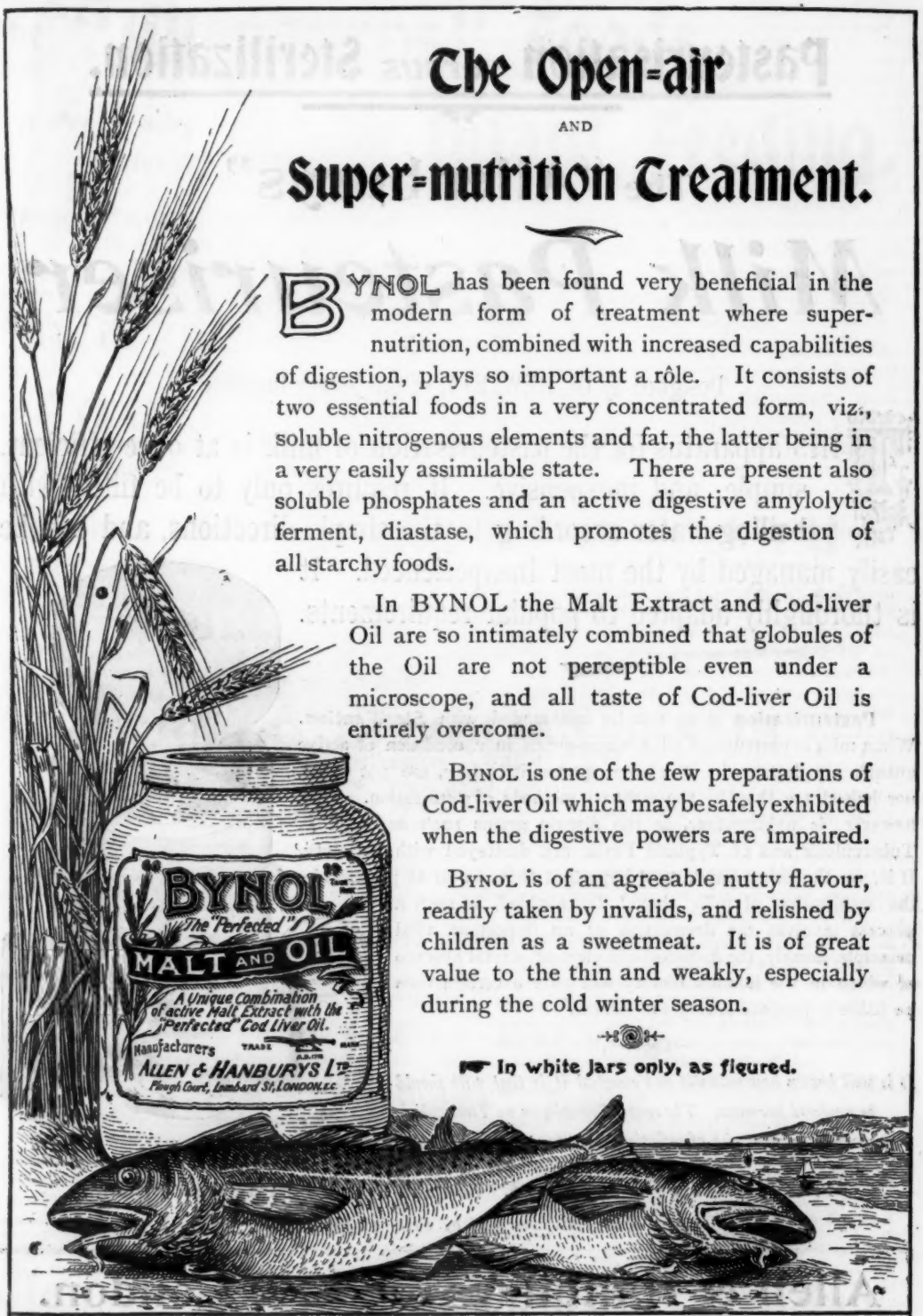
(125 years in St. Paul's Churchyard),

27 & 28, CHARTERHOUSE SQUARE, and 44, CHARTERHOUSE STREET, LONDON, E.C.

The Open-air

AND

Super-nutrition Treatment.


"BYNOL"
The "Perfected"
MALT AND OIL
A Unique Combination of active Malt Extract with the "Perfected" Cod Liver Oil.
Manufacturers
ALLEN & HANBURYS Ltd
Plough Court, Lombard St, LONDON, E.C.

BYNOL has been found very beneficial in the modern form of treatment where super-nutrition, combined with increased capabilities of digestion, plays so important a rôle. It consists of two essential foods in a very concentrated form, viz., soluble nitrogenous elements and fat, the latter being in a very easily assimilable state. There are present also soluble phosphates and an active digestive amylolytic ferment, diastase, which promotes the digestion of all starchy foods.

In BYNOL the Malt Extract and Cod-liver Oil are so intimately combined that globules of the Oil are not perceptible even under a microscope, and all taste of Cod-liver Oil is entirely overcome.

BYNOL is one of the few preparations of Cod-liver Oil which may be safely exhibited when the digestive powers are impaired.

BYNOL is of an agreeable nutty flavour, readily taken by invalids, and relished by children as a sweetmeat. It is of great value to the thin and weakly, especially during the cold winter season.

☛ In white jars only, as figured.

ALLEN & HANBURYS LTD, Plough Court, Lombard St, LONDON, E.C.

Pasteurisation *versus* Sterilization.

The "Allenburys"

Milk Pasteuriser

(PATENTED).

Designed by Dr. HEWLETT, of the Jenner Institute

THIS apparatus for the pasteurisation of milk is at once efficient, simple, and inexpensive. It requires only to be filled with boiling water according to the simple directions, and can be easily managed by the most inexperienced. It is thoroughly adapted to popular requirements.

Pasteurisation must not be confounded with **Sterilization.** When milk is pasteurised all noxious germs in a condition of active growth are destroyed. The latent spores, it is true, are not killed, nor indeed are they by the ordinary methods of sterilization. This, however, is unimportant, as the disease germs such as those of Tuberculosis and of Typhoid Fever are destroyed with certainty. It is, on the other hand, most important that, as far as practicable, the sterilization of milk should be avoided, as such a process involves the destruction of an important vital principle, namely, the Antiscorbutic element, a total absence of which in the infant's dietary will after a certain time be liable to produce scurvy and rickets.

It is well known how valuable and essential it is that milk should be rendered harmless. The recent Commission on Tuberculosis showed the great risk of infection by milk.

Price in tin, 6/6; Japanned. 7/6. Box and Post 1/- extra (Great Britain).

Full particulars sent by Post on application.

Allen & Hanburys Ltd., Plough Court, Lombard Street, London.

Surgical Instrument Department: 48, WIGMORE STREET, W.

The "Allenburys" Foods for Infant Feeding.

A Progressive Series of Foods.

THE **"Allenburys" Milk Foods** so closely approximate in composition to the natural food as to supply an artificial diet almost identical with, and in practice found, when intelligently used, to be a reliable substitute for the mother's milk. So much so is this the case that an infant can take these Foods and the breast alternately without any disturbance to its digestive organs.

All ordinary substitutes for the mother's milk fail in some important attribute, thus the usual substitute, cow's milk, differs materially in composition, which no amount of mere dilution can correct, being deficient in fat, albumen, and lactose, whilst the casein is in excess. Futher, as obtained in towns, cow's milk invariably swarms with bacteria, many of which are pathogenic to the alimentary canal of the infant.

THE

"Allenburys" Milk Food No. 1,

for use from Birth to Three Months,

Affords, when prepared for use, a *correct* substitute for human milk. It is manufactured from fresh cow's milk, so modified as to present all the constituents of human milk in their true relative proportions. Being in a desiccated form it keeps perfectly and requires the addition of *boiled* water only to furnish a pure and easily digested food suitable for infants during the first three months of life.

THE

"Allenburys" Milk Food No. 2,

for use from Three to Six Months.

This No. 2 Food contains all the elements of human milk in proper proportions. To this is added a small proportion of the soluble products of the action of malt upon wheat, *i.e.* Maltose, Dextrine, and Soluble Phosphates. These ingredients are a valuable adjunct to the increasing needs of the infant economy, yet the Food is readily and easily assimilated, there being no unconverted starch present. The No. 2 Food is designed for children between three and six months of age.

THE

"Allenburys" Malted Food No. 3

for Infants of Six Months and upwards.

This is a farinaceous Food, prepared by improved methods after Baron von LIEBIG'S formula. The basis is fine wheaten flour which has been thoroughly cooked and partially digested by an active Malt Extract, so that a large proportion, but not all, of the starch has been converted. It is particularly rich in soluble phosphates and albuminoids. Being a farinaceous Food, it requires the addition of fresh milk in its preparation. This Food should be given from six months and upwards.

The "ALLENBURYS" FOODS should be given as directed and not continued beyond the time indicated. Thus the No. 1 Food should only be given during the first three months of life, the No. 2 between the third and the sixth month, and the No. 3 Food after the child is six months of age.

Note.—*When infants are reared artificially it is strongly advised that some fresh elements of diet be given. Eminent authorities have recommended that a little raw meat-juice, grape, or sweetened orange juice, be given two or three times a week after the first three or four months. Full directions as to this are issued with each tin of Food.*

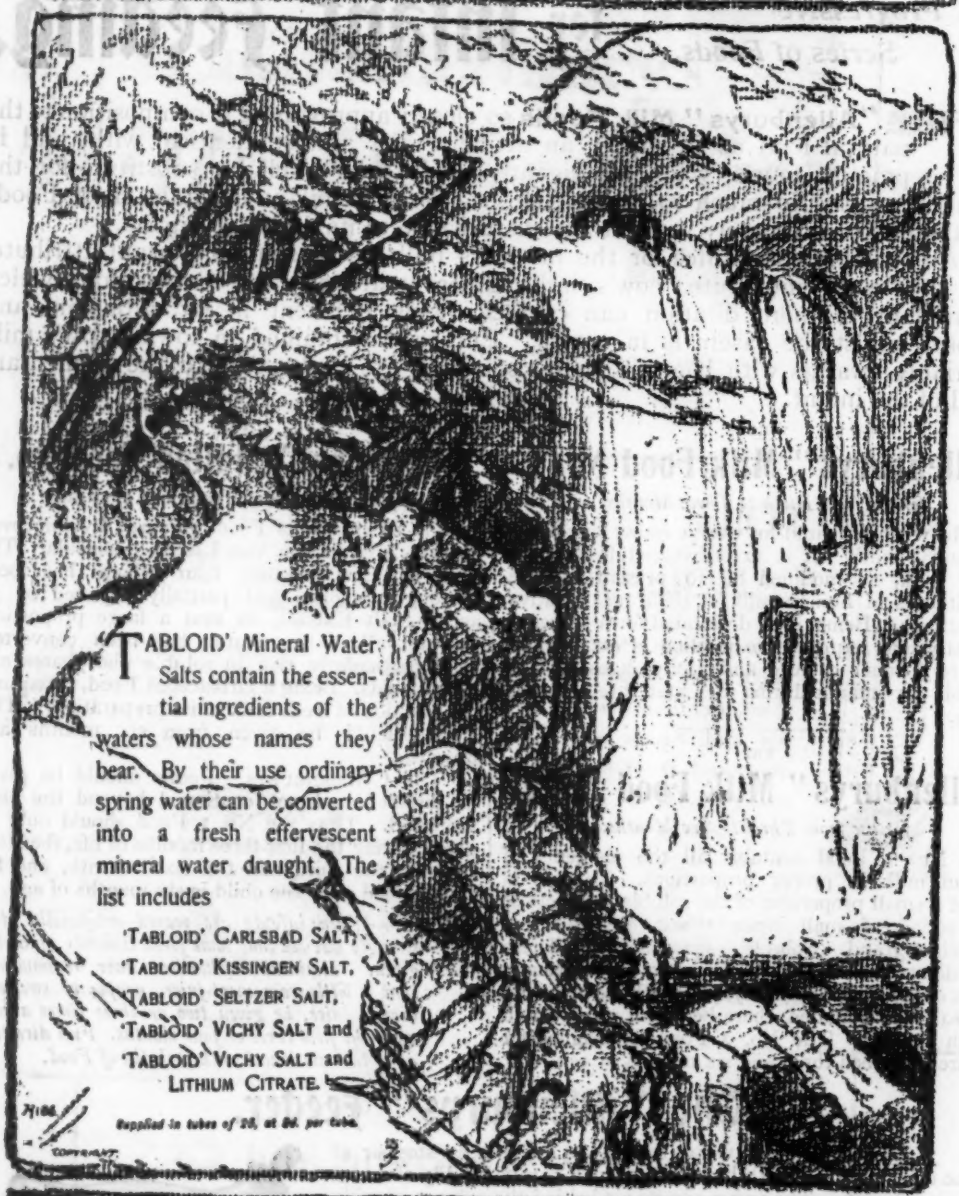
The "Allenburys" Feeder.

This bottle has the nipple at one end and a valve-stopper at the other, so that, both being removed, it can be readily cleansed under the tap. The valve admits air behind the column of milk, thus avoiding the swallowing of air and the resulting wind-colic; while the rubber nipple is easily detached, and can be turned inside out. The bottle is graduated. Price 1/3 each.

Allen & Hanburys Ltd., Plough Court, Lombard Street, London.

'TABLOID' MINERAL WATER SALTS

(EFFERVESCENT ARTIFICIAL).



'TABLOID' Mineral Water Salts contain the essential ingredients of the waters whose names they bear. By their use ordinary spring water can be converted into a fresh effervescent mineral water draught. The list includes

'TABLOID' CARLSBAD SALT,
'TABLOID' KISSINGEN SALT,
'TABLOID' SELTZER SALT,
'TABLOID' VICHY SALT and
'TABLOID' VICHY SALT and LITHIUM CITRATE.

Supplied in tubes of 25, at 2d. per tube.

BURROUGHS WELLCOME & Co., LONDON and SYDNEY. . .

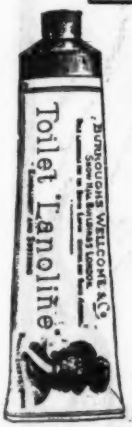
'LANOLINE'

TRADE MARK

TOILET PREPARATIONS

This Dartring appears on all labels of these genuine products.

'Dartring Brand.'



TOILET .. 'LANOLINE'

"An emollient, soothing application for irritable skins, useful for chapped lips and hands, abrasions and eruptions of many kinds. In a thin layer over a wound it is an effective protective. . . . Such a layer forms an impassable barrier to disease germs."—BRITISH MEDICAL JOURNAL.

Supplied in collapsable tubes, at 4/6 and 9/- per dozen.

Telegraphic Address:—"TABLOID, LONDON."

'LANOLINE' TOILET .. . . . SOAP

"An excellent and valuable preparation in which there is a distinct excess of 'Lanoline' over alkali,"—LANCET.

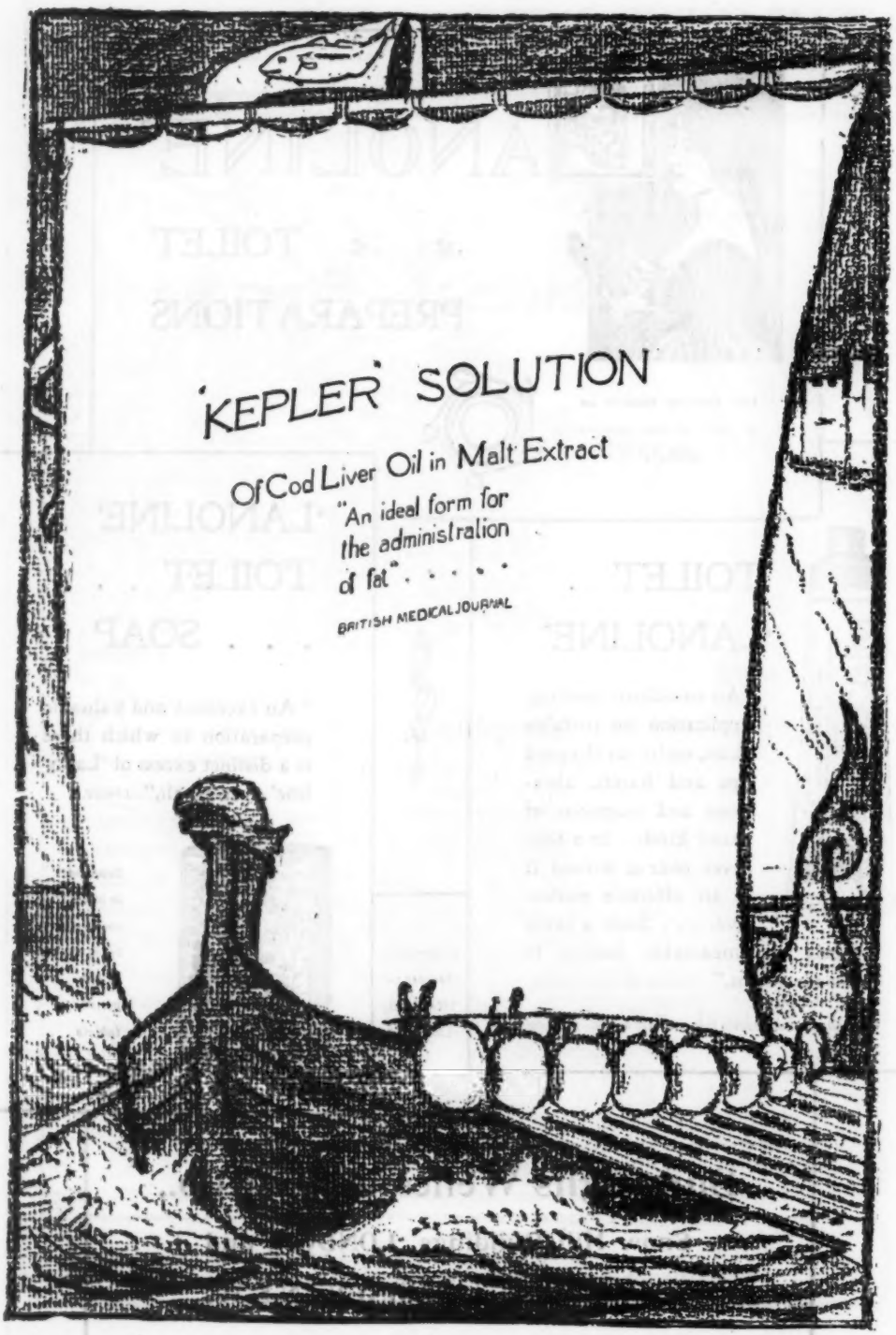
Supplied in boxes containing three tablets, at 4/6. per dozen tablets.

Burroughs Wellcome and Co.,

Snow Hill Buildings, LONDON, and

108, Pitt Street, SYDNEY, N.S.W.

[COPYRIGHT] M 165



Burroughs Wellcome & Co., LONDON AND SYDNEY.

[COPYRIGHT]

H 1894

TRADE MARK 'Tabloid' BRAND

Medicinal Syrups

'Tabloid' Brand
Easton Syrup.

dr. 1/2 [1.8 c.c.], and **dr. 1** [3.5. c.c.]

(*Sugar-coated.*)

No liquid preparation can retain its therapeutic powers so perfectly as 'Tabloid' Easton Syrup. "Much preferable to the syrup."—
GLASGOW MEDICAL JOURNAL.

dr. 1/2, bottles of 25 and 100, 6d. and 1s. 2d. per bottle.
dr. 1, bottles of 25 and 100, 9d. and 1s. 8d. per bottle.

'Tabloid' Brand
Hypophosphites Compound.

gr. 1-1/2 [0.097 gm.], and **gr. 3** [0.194 gm.]

(Representing respectively dr. 1/2 and dr. 1 of Standard Syrup.)

(*Plain or Sugar-coated.*)

"Many of the drawbacks of the Standard Compound Syrup are surmounted by this convenient preparation."—THE LANCET.

gr. 1-1/2, bottles of 25 and 100, 6d. and 1s. 2d. per bottle.
gr. 3, bottles of 25 and 100, 9d. and 1s. 8d. per bottle.

'Tabloid' Brand
Chemical Food (Phosphates Comp.)

gr. 2-1/2 [0.162 gm.], and **gr. 5** [0.324 gm.]

(Representing respectively dr. 1/2 and dr. 1 of Compound Syrup of Phosphates.)

(*Sugar-coated.*)

"Possesses the advantages of permanence, portability and the absence of free phosphoric acid, present in the syrup as a solvent."—
BRITISH MEDICAL JOURNAL.

gr. 2-1/2, bottles of 25 and 100, 5d. and 1s. per bottle.
gr. 5, bottles of 25 and 100, 8d. and 1s. 6d. per bottle.

AVOID IMITATIONS.

The general appreciation and adoption of the fine pharmaceutical preparations of B. W. & Co. by the medical profession throughout the world have encouraged imitators to offer crude substitutes. As the use of such inferior imitations is liable to prove injurious to patients, medical men are requested to report any cases of substitution which may come under their notice. To ensure the supply of pure and reliable preparations physicians should distinctly specify the trade mark 'Tabloid' or use the distinguishing initials B. W. & Co., or the full name, BURROUGHS WELLCOME AND CO. . . . . .

See Wellcome's Medical Diary, 1900, pages 52, 55, 56 and 57.

Burroughs Wellcome & Co., LONDON and SYDNEY.

[COPYRIGHT] H 198

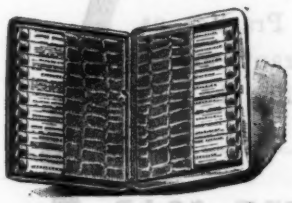
TRADE MARK
'TABLOID' BRAND
MEDICINE CASES
THE superiority of 'Tabloid' medicine-chest equipments for military campaigns has been abundantly demonstrated during various British military operations in savage lands. The high purity, constant reliability and keeping properties of 'Tabloid' Drugs in all climates, have won the full confidence of the medical profession. The portability and practicability of 'Tabloid' Equipments make them excel for use on the march, on the field of battle, and in the camp hospital . . . . .
A great variety of designs is made ranging from small pocket-cases to caravan outfits.
FULL LISTS WILL BE SENT ON REQUEST.
BURROUGHS WELLCOME & CO
LONDON & SYDNEY
Copyright
M192.

New Year's Presents
FOR MEDICAL MEN.

TRADE MARK 'TABLOID' TRADE MARK

MEDICINE CASES.

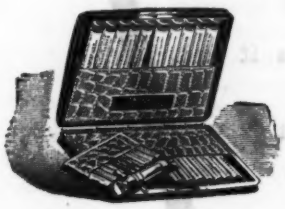
No. 23.



'TABLOID' MEDICINE POCKET-CASE.

Contains ten to sixteen tubes of 'Tabloid' Drugs, according to the diameter of the tubes fitted complete from 9/-
Highly finished cases in brown or green crocodile or lizard skin, from... ... ... 20/-

No. 24.



EMERGENCY, 'TABLOID' MEDICINE CASE.

Fourteen tubes of 'Tabloid' Drugs and twelve tubes of 'Tabloid' Hypodermic Drugs, Patent Hypodermic Syringe, etc.
fitted complete, from 24/-
In brown or green seal ... ,, 32/-
In brown or green crocodile ,, 40/-

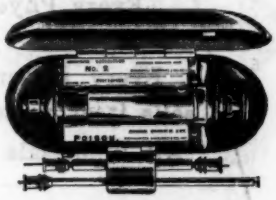
TRADE MARK 'TABLOID' TRADE MARK

HYPODERMIC CASES.

No 30.

'TABLOID' HYPODERMIC POCKET-CASE.

The 'Miniature,' with fifteen tubes of 'Tabloid' Hypodermic Drugs, Syringe with two needles, etc., fitted complete 14/-
In aluminium ,, ,, 18/-
In brown or green seal ,, ,, 19/-
In crushed morocco ,, ,, 20/-
In brown or green crocodile ,, 21/-
In lizard skin or green Levant ,, 21/-



'MUSSEL-SHELL' HYPODERMIC POCKET-CASE—'Tabloid' Brand.
(Design Registered 210726/6)

This case is made of nickel-plated metal, and is shaped like a mussel shell. It contains a patent hypodermic syringe, an exploring and two regular needles, three or four tubes of 'Tabloid' Hypodermic products, complete, in leather case ... 10/6

A full list will be sent on request.

Burroughs Wellcome and Co.,
LONDON and SYDNEY.

[COPYRIGHT] H 1949

That Medical Man is yet to be found who after investigation and trial fails to fully endorse the claims made for

FELS'S GERMICIDE SOAP.

Nearly three thousand letters of approval have been received from the Medical Profession of Great Britain, showing that in Obstetrics, most forms of Skin Diseases, in Dental Practice, as a Germicide, as a Deodorant, and in numerous other uses, including the Toilet,

FELS'S GERMICIDE SOAP

stands alone.

It contains **HYDRARG. BICHLORID., SAL. ALEMBROTH, B. NAPHTHOL,** and **EUCALYPTOL.**

Every Physician who tests it believes in it.

Every modern Chemist stocks it and sells it at protected prices.

All Wholesale Houses supply it.

1/- per CAKE; 8/4 per Dozen.

LORIMER & CO.,

Sole Agents for FELS'S GERMICIDE SOAP,

BRITANNIA ROW, LONDON, N.

An Ideal "Complete Food."

Virol,

An unique preparation, combining Heat-producers (fat and oils) with Flesh-formers (iron-bearing proteids).

FOR CHILDREN, begin with an egg-spoonful three times a day.

> "In children who are fed upon a deficient amount of fat the bony structures are imperfect and slow of growth. In a word, deficiency of fat in the food (of infants) is one of the chief factors in the production of rickets."—CHEADLE.

VIROL is a combination of Red Bone Marrow, highly diastasic Malt Extract, Eggs (with the lime of the shells), and Lemon Juice.

It is a Valuable Hœmatinic as well as a Fat Food.

***THE LANCET* says:—**

> "From our own analytical observations and experience we are led to regard Virol as of particular value and a complete food, because rich alike in all three classes of repairing material—the NITROGENOUS, HEAT PRODUCING, BONE FORMING—derived from animal, vegetable, and mineral sources. In appearance and consistency it is like honey, and to the taste it resembles excellent toffee."

***The BRITISH MEDICAL JOURNAL* says:—**

> "Free from the objectionable character of cod-liver oil, and possessing considerable nutritive value."

The taste of Virol is delicious. In this respect it possesses a surpassing advantage over cod-liver oil and other preparations generally prescribed for Invalids and Children, whilst in nutritive properties Virol is equal and in most cases superior to such preparations.

Jars, 1/-, 3/-, and 4/6.

BOVRIL LIMITED, FOOD SPECIALISTS AND HOSPITAL PURVEYORS, LONDON,

Contractors to Her Majesty's and Foreign Governments.

CHAIRMAN: J. LAWSON JOHNSTON. VICE-CHAIRMAN: THE VISCOUNT DUNCANNON, C.B.

CONSULTING PHYSICIAN:
WILLIAM R. SMITH Esq., M.D., D.Sc., F.R.S. Edin., President, Royal Institute of Public Health.

HOVIS BREAD

is a perfected germ bread.

A sample loaf of Hovis will be gladly sent to any member of the Medical Profession who will apply for one. Address: THE HOVIS-BREAD CO., LD., MACCLESFIELD.

Hovis has created the public taste for a digestive germ bread.

It avoids the imperfections of wholemeal, is more nutritious than brown, and far surpasses the ordinary white bread.

The proportion of wheat germ in it greatly adds to its nutritive properties besides imparting a very tasty flavour.

Many makers imitate it, but none successfully. The subtle something which Hovis has and others have not is the outcome of the Hovis secret process.

Most Bakers make and deliver it daily, so that it may be obtained with facility in every town.

If not known, the address of the nearest Hovis Baker will be sent on application to THE HOVIS-BREAD FLOUR CO., LD., MACCLESFIELD.

For Babies.

For Babies. Robinson's PATENT BARLEY "A FINE POWDER" For Babies.

For Babies.

EXCERPT FROM

A LETTER FROM ONE MEDICAL MAN TO OTHERS:—

"Is it not a fact that, in our desire to get wise and wiser in our day and generation, we are apt sometimes to discard so-called old-fashioned remedies for newer, and for those we really know far less about? The proverb 'Old age is honorable' is, methinks, quite as applicable to medicine as it is to men. In the eyes of some of us, again, simplicity would seem to be a crime imputed to certain remedies. You know and I know well that even our British Pharmacopœia might with very great advantage to the professional man be decimated. It suffers from all kinds of troubles brought on by overcrowdedness—if I may dare coin a new word. I am almost ashamed of myself when I adopt with avidity some suddenly introduced new medicament such as those mysterious preparations that come to us directly from the chemical laboratory. How we used to swear by sulphonal, phenacetin, anti-pyrin, chloral, &c., to say nothing of the bromide family. We still know the good that is to be obtained by such articles carefully and considerately prescribed, but we have also found out the bad.

"Well, I want in this letter to say a word for a good old-fashioned kindly remedy—the decoction of barley. We may order barley water to patients—I am speaking from long experience—we may even describe how it is to be made, and the mother or nurse will listen and then make it her own way, which is almost certain to be wrong. My own practice has been world-wide—in Her Majesty's service, at sea and on shore, in tropical countries and in the Arctic regions—and I have always found the preparation of this simple emollient and demulcent drink a stumbling-block to nurses.

"But by using Robinson's Patent Barley all difficulty is at once removed. No error can be made. I happen to know that it is manufactured from the best of barley and cleanly made, so in using it or ordering it the medical man can be easy in his mind. I need not remind the professional of its beneficial effects in so very many ailments. In cases of inflammation or fever, when other remedies heat, this has the reverse effect, especially if flavoured with lemon or sugar. Those who suffer from gravel may drink it *ad libitum*, and it will soften and ease the passage of small calculi.

"To children it is of course invaluable; for, although we do not give starchy food to babies, we mix with great advantage barley water with cow's milk when the mother is deficient in nutritive qualities. Barley water may also be used with great advantage, mixed with milk, in many cases where plain milk would form an indigestible clot.

"I can therefore right heartily recommend this handy, pure Patent Barley, made by the old old firm of Keen, Robinson & Co., Ltd.

"I am, &c., &c.,

"M.D., C.M., &c., &c."

PERFECTLY PURE BUT NOT INSIPID.

"THE LANCET"

AND

TIBBLES' Vi-Cocoa

THE LANCET says:

"Vi-Cocoa must be assigned a place in the front rank of really valuable foods, since it is the embodiment of all the numerous principles contained in Malt, Hops, Kola, and Cocoa."

THE

"BRITISH MEDICAL JOURNAL"

AND

TIBBLES' Vi-Cocoa

The BRITISH MEDICAL JOURNAL says:

"Vi-Cocoa is a very palatable beverage of great stimulating and sustaining properties."

THE "MEDICAL MAGAZINE"

AND

TIBBLES' Vi-Cocoa

The MEDICAL MAGAZINE says:

"Medical practitioners will find a valuable weapon in Tibbles' Vi-Cocoa in combating the various conditions of nervous exhaustion and enfeebled digestion. The ingredients of which it is composed are carefully selected and of undoubted purity and strength."

AN ANALYST

AND

TIBBLES' Vi-Cocoa

From MATTHEW A. ADAMS, F.R.C.S., F.I.C., F.C.S., *Trinity House, Maidstone; Public Analyst in the County of Kent and Past-President of Society of Public Analysts.*

"In my opinion Vi-Cocoa is a happy combination, enhancing the food value of ordinary cocoas."

"HIPI."

Can be obtained from all Chemists, Grocers, &c., in 4 oz. Tins, price 1s.

A PURE MUTTON ESSENCE.

Can be obtained from all Chemists, Grocers, &c., in 4 oz. Tins, price 1s.

SOLD WHOLESALE BY

GEO. NELSON DALE & CO., Ltd., 14, Dowgate Hill, London, E.C.

SOMATOSE

SOMATOSE is acknowledged by eminent Medical Authorities at home and abroad to be

AN IDEAL FOOD FOR INVALIDS & CONVALESCENTS.

SOMATOSE contains nearly 80 per cent. of Meat Albumen, is invaluable in wasting diseases, puts life and strength into the weakest invalids, as well as those whose condition precludes the use of ordinary food.

SOMATOSE also acts directly as a tonic, and speedily increases the appetite.

SOMATOSE is an almost tasteless and odourless powder, easily tolerated by the most delicate stomachs.

SOMATOSE is not a Patent Medicine or a drug, but a Therapeutic Food in a form which has never before been obtained. It is easily soluble in water, milk, soup, coffee, cocoa, &c.

SOLD BY ALL LEADING CHEMISTS AND STORES.

SAMPLES AND ALL PARTICULARS FROM

THE BRITISH SOMATOSE CO., Ltd.,

165, QUEEN VICTORIA STREET, LONDON, E.C.

TROPON.

TROPON BISCUITS. TROPON CHOCOLATE. TROPON RUSKS.

TROPON is a natural, pure albumen, obtained by complicated chemical process from animal and vegetable substances. Is

THE FOOD FOR INVALIDS.

TROPON is a very fine dry powder, promptly absorbed and digested by the most delicate stomach. It is absolutely free from bacilli, and costs but one-sixth of the price of albuminous preparations, containing only 50 to 80 per cent. albumen.

TROPON is a Food, and not a patent medicine.

SOLD BY ALL LEADING CHEMISTS AND STORES.

SOLE AGENTS: **ARTHUR REINER & CO.,**

DASHWOOD HOUSE, OLD BROAD STREET, E.C.

SAVORY & MOORE'S

PEPTONIZED

COCOA & MILK | **MILK** | **COFFEE & MILK (CAFÉ ZYLAK)**

These three preparations are made with pure rich PRE-DIGESTED Country Milk, and, by mere dilution with hot water, afford a delicious restorative beverage, the assimilation of which requires no digestive effort.

TINS 2s. 6d. HALF-TINS (SAMPLES), 1s. 6d.

Obtainable Everywhere.

143, NEW BOND STREET, LONDON.

"The Standard of Highest Purity."—*THE LANCET.*

CADBURY'S

COCOA

ABSOLUTELY PURE, therefore BEST.

Entirely free from all admixtures, such as Kola, Malt, Hops, &c.

No Alkali used to darken the colour.

"Cocoa is in itself a perfect food, and requires no addition of drugs whatever."—(DR. ANDREW WILSON.)

Always insist on having CADBURY'S (sold only in Packets and Tins), as other Cocoas are often substituted for the sake of extra profit.

L-E-M-C-O.

Doctors have long been confused by the variety of Liebig's Extracts there are for sale. They think all come from the Liebig Company. They do not—ONLY one kind—viz., that signed J. v. Liebig in blue, and certified by Justus von Liebig and his successors. This is the original brand—the brand largely advertised. To distinguish it from all others, it will bear, from 1st Jan., 1900, on the top and bottom and back of each jar a new label, with the initials of Liebig's Extract of Meat Company—Lemco

LIEBIG COMPANY'S EXTRACT

Signed *J. v. Liebig*

in **BLUE.**

LAZENBY'S

These squares are prepared in 13 Varieties (MULLIGATAWNY, JULIENNE, GRAVY, &c.), and should find a place in every store-room, being invaluable for making soup at short notice or improving stock. They will keep good any reasonable length of time and are packed in neat boxes containing 6 & 12 Squares.

ONE 6D. SQUARE
WILL MAKE A PINT & A HALF
OF STRONG NUTRITIOUS SOUP

SOLD BY ALL THE LEADING GROCERS & STORES.
Should any difficulty be experienced in obtaining the Squares, please communicate at once with the Manufacturers.
E. LAZENBY & SON, LTD., 18 Trinity St., LONDON. S.E.

SOUP SQUARES

THE LANCET, 22nd July, 1899, says :—

"This brandy shows excellent features on analysis, while the evidence of taste is distinctly in favour of the description that it is an old matured grape spirit. It possesses that etherial fragrance due to the peculiar ethers of wine. Our analysis yielded the following results :—Alcohol, by weight 41·00 per cent., by volume 48·43 per cent., equal to proof spirit 84·87 per cent. ; acidity expressed as acetic acid, 0·033 per cent. ; extractives 0·69 per cent. ; mineral matter, *nil;* alcohol in volatile ethers, two grammes per 10 litres. The flavour is soft and mellow and the aroma is characteristic of a sound and mature wine-derived spirit. In view of these analytical and general evidences this brandy may be described as particularly suitable for medicinal purposes."

MARTELL'S THREE STAR BRANDY.

THE MEDICAL PRESS, 9th August, 1899, says :—

"We have carefully examined a sample of this well-known spirit by the usual tests, and the results obtained by analysis fully warrant our recommending it for medical and dietetic purposes. The analysis gave the following figures :—

Alcohol (as proof spirit)	86·5 per cent.
Extractives	·68 " "
Ash	Nil.
Acidity	·036 " "
Ethers (as alcohol)	·028 " "

"We analysed this product some ten or more years ago, and finding that it still maintains its exceptionally high character, we are consequently in a position to speak highly of it as a genuine old brandy made from wine, well matured, and free from all compounds which might detract from its value as a medicinal agent."

THE NATURAL MINERAL WATERS OF (STATE SPRINGS)

VICHY

CÉLESTINS. For Diseases of the Kidneys, Gravel, Gout, Rheumatism Diabetes, &c.

GRANDE-GRILLE. For Diseases of the Liver and Biliary Organs, &c.

HÔPITAL. For Stomach Complaints.

VICHY - ÉTAT PASTILLES. Two or three Pastilles after each meal facilitate digestion.

VICHY - ÉTAT COMPRIMÉS. For instantaneously producing an effervescing alkaline water.

SAMPLES AND PAMPHLETS FREE TO MEMBERS OF THE MEDICAL PROFESSION ON APPLICATION.

CAUTION.—Each bottle from the STATE SPRINGS bears a neck label with the word "VICHY-ÉTAT" and the name of the SOLE AGENTS —

INGRAM & ROYLE, Ltd., East Paul's Wharf, 26, Upper Thames Street, E.C.,

And at LIVERPOOL and BRISTOL.

CARLSBAD

NATURAL Mineral Waters, Salt, &c.

THE WATERS FROM THE

SPRUDEL, MÜHL, and SCHLOSS Springs

are largely prescribed in cases of

CHRONIC GASTRIC CATARRH, HYPERÆMIA of the LIVER, GALL-STONES, DIABETES, RENAL CALCULI, GOUT, DISEASES of SPLEEN, &c.

The **NATURAL SPRÜDEL SALT** is now prepared from the Mineral Water in the form of *Powder* ("Pulverförmig"), and contains *all the constituents* of the *Sprüdel* Spring. It has the great advantage in not being affected by change of temperature or exposure to the atmosphere, therefore in this form is the most reliable and best adapted for **EXPORT.**

A SAMPLE of the SALT in POWDER FREE to MEMBERS of the MEDICAL PROFESSION on application to the Sole Importers for the United Kingdom and Colonies.

INGRAM & ROYLE, LTD.,

EAST PAUL'S WHARF, 26, UPPER THAMES ST., LONDON.

19, South John Street, LIVERPOOL, and Bath Bridge, BRISTOL.

☞ To avoid imitations, please see that THE WRAPPER round each bottle of SALT bears our Signature.

THE LATEST DISCOVERY.

DIASTOL

BEING A PERFECTLY PURE AND VERY CONCENTRATED EXTRACT OF DIASTASE, is the MOST EFFICACIOUS NATURAL REMEDY for ACUTE CASES of DYSPEPSIA and KINDRED AFFECTIONS.

May be freely used by the middle-aged, and those inclined to stoutness.

Also of great value in Anæmia, and Ulcerous Conditions of the Stomach.

PUT UP IN **2/-** *&* **3/9** *BOTTLES.*

"STANDARD CO.'S" MALT EXTRACT is three times stronger in diastase than any other brand, and is much more economical, owing to its more concentrated form and smaller dosage. Remarkably beneficial in chest and digestive troubles. Also for weak and ricketty children and in cases of wasting.

PUT UP IN **1/3, 2/3,** *&* **4/-** *BOTTLES.*

Samples sent post free to Medical Men, Qualified Nurses, and Chemists on application.

MANUFACTURED BY THE

STANDARD MALT EXTRACT COMPANY, LTD., 21, WATER STREET, LIVERPOOL.

OXYDOL.

OXYDOL is a hydric peroxide prepared from magnesium dioxide. Its value consists in the property of evolving nascent Oxygen when in contact with all albuminous tissue. It is perfectly stable below 90° F. As an antiseptic not only is it stronger than bichloride of mercury, but, being non-toxic, can be applied with perfect freedom.

OXYDOL covers a larger field of usefulness in Therapeutics than any other remedy. It is a more powerful deodorant than any other antiseptic.

It is administered by the mouth and per rectum in specific Diseases of the Alimentary Canal, especially Typhoid and Dysentery. It has been found efficient in Gastritis, Gastric Ulcer, and Infantile Diarrhœa.

OXYDOL given by an atomiser gives almost instant relief in the dyspnœa of Pulmonary Affections. It also corrects the digestive troubles of Pulmonary Phthisis and prevents the spread of tubercle.

IN SURGERY

Unqualified results have been obtained from its use in Rectal Operations (such as Fistula) and all Septic Conditions (such as washing out sinuses and cavities, dressing septic wounds, &c.). Foul-smelling discharges which have defied all other deodorants are rendered inodorous.

OXYDOL is supplied in 3, 6, and 10 volume strengths, price **2/6** per bottle post free, and may be obtained from all Chemists.

The usual trade discounts are allowed to Medical Men for Dispensing.

Free Samples will be supplied to the Profession on application.

OXYDOL, LTD., 56, BERNERS STREET, LONDON, W.

56

FALIÈRES' PHOSPHATINE.

THE IDEAL FOOD FOR INFANTS & CHILDREN.

REGISTERED TRADE MARK, No. 177,078,
"OSPHATINE."

Under the influence of FALIÈRES' PHOSPHATINE Children soon acquire a robust constitution, teething is facilitated, the mineral strengthening and building up of the bones is assured, and diarrhœa but very rarely occurs.

THE LANCET of 8th October, 1898, in its Analytical Report of PHOSPHATINE, says:—"Added to milk it affords a food admirably adapted for the requirements of infants. **Phosphatine, in fact, supplies just those important elements in nutrition upon which the proper growth and development of infants so much depend."**

SAMPLES, with DESCRIPTIVE PAMPHLET, SENT FREE to the PROFESSION on application to

FALIÈRES' PHOSPHATINE AGENCY, 64, Holborn Viaduct, LONDON, E.C.

We shall be pleased to send gratuitously some of the PHOSPHATINE to the Hospitals for Poor Children and to the Poor recommended to us by Medical Men.

COX'S TASTELESS PILLS.

Send for our New PRICE LIST for JANUARY, 1900,

Containing 800 useful PILL FORMULÆ and a practical THERAPEUTIC INDEX.

SENT POST FREE WITH SAMPLES ON APPLICATION.

ARTHUR H. COX & CO., BRIGHTON.

The ORIGINAL MAKERS of TASTELESS PILLS.

SCHERING'S UROTROPINE.

UROTROPINE is a valuable urinary antiseptic, and has proved to be most effective in many forms of Cystitis.

Most satisfactory results are reported even in the most obstinate cases.

UROTROPINE also has a strong solvent action upon Uric Acid Concretions, and is therefore recommended in all Gouty Affections.

SAMPLE BOTTLES, 6d. Post Free. LITERATURE on APPLICATION.

A. & M. ZIMMERMANN, 9 & 10, St. Mary-at-Hill, London, E.C.

MEDICINAL PRODUCTS OF RENOWN.

NIRVANINE, a soluble anæsthetic; reliable, antiseptic, and free from toxic effects.

Dr. KNORR'S ANTIPYRIN, "LION BRAND," Official in B.P. Addendum of 1890 and B.P. of 1898.

MIGRAININE in Migraine and Nervous Headaches.

LYSIDINE, excellent Solvent for Uric Acid in Gouty Complaints.

ARGONIN, specific in Gonorrhœa, a mild, non-irritating Silver Preparation.

ORTHOFORM.—A local Analgesic for Painful Wounds, Burns, Ulcers, cracks in the nipples absolutely non-poisonous, energetically antiseptic, for internal and external use.

Dr. KOCH'S NEW TUBERCULINE
Prof. BEHRING'S DIPHTHERIA REMEDY } Always fresh and of standard strength.

FORMALDEHYDE, NUTROSE, BENZOSOL, &c.

DERMATOL, a true substitute for Iodoform, odourless and free from irritation.

For further information, samples, literature, &c. (free of charge to the Medical Profession), apply to the

FARBWERKE vorm. MEISTER, LUCIUS, & BRÜNING, 51, St. Mary Axe, London, E.C.

JOSEPH TURNER & CO.'S
NEW SYNTHETIC REMEDIES.

SYNTHESIZED and MANUFACTURED in ENGLAND.

PIPERIDINE TARTRATE. The New Uric Acid Solvent.

Piperidine possesses uric acid solvent powers greatly superior to any other known substance, and, in combination with tartaric acid forms a pleasant salt, which may be taken in 5 to 15 gr. doses in all wines, mineral waters, &c., at or before meals. (*See THE LANCET, July 28th, 1898; BRITISH MEDICAL JOURNAL, Feb. 27th, 1897; CENTRALBLATT DER PHYSIOLOGIE, Bd. xi., p. 434.*)

GUAIPEROL (Guaiacolate of Piperidine).

This **REMEDY for PHTHISIS,** which combines the antiseptic properties of Guaiacol with the vascular tonic action of Piperidine, has been tried with considerable success at the London and other Chest Hospitals. It has not the irritant properties of Guaiacol, and possesses many advantages over the latter substance and preparations of the same now on the market. DOSE: from 10 gr. twice a day, preferably in cachets, after meals. (*See BRITISH MEDICAL JOURNAL, January 16th, 1897, and July, 16th, 1898, &c.*)

ERYTHROL TETRA NITRATE (Turner). The New Vaso Dilator.

The difference between the action of Erythrol Tetra Nitrate and other vaso dilators consists mainly in the fact that the vaso dilatation produced from it is of a *much more permanent* nature, the administration of gr. i. by the mouth causing a reduction in arterial tension lasting for more than five hours. (*See BRADSHAW LECTURE, 1896; CROONIAN LECTURE, 1896; BRITISH MEDICAL JOURNAL, April 10th, 1897, January 1st, 1898, and January 8th, 1898, &c.*)

SOLE PATENTEES & MANUFACTURERS, from whom Samples and Literature may be obtained:—

JOSEPH TURNER & CO., LTD., QUEENSFERRY, FLINTSHIRE, N.W.

ASTHMA, CATARRH, DIFFICULTY OF BREATHING, NERVOUS AND Obstinate Coughs.

IMMEDIATE RELIEF, RAPID IMPROVEMENT
BY THE USE OF

POUDRE ANTIASTHMATIQUE
AND
CIGARETTES (Gambier).

Dr. CHOTTEAU'S Formula. 25 years' success.

GAMBIER, Phien., Chimiste de 1re Classe, Membre de la Ste. Chimique de Paris.

SAMPLES FREE AND POST PAID ON APPLICATION TO

GILBERT KIMPTON & CO., 19, St. Dunstan's Hill, LONDON, E.C.

SOLE AGENTS FOR ENGLAND.

MISTURA CASCARÆ SAGRADÆ COMP.

Prepared from Selected Barks of RHAMNUS PURSHIANA and RHAMNUS FRANGULA, flavoured with AROMATIC SYRUP.—*DOSE*—5 i. to 5 iv.

To obtain the best results from the Barks of Rhamnus Purshiana and Frangula it is necessary that they should be collected, not only at the right season of the year but of the proper age, when the bark is neither too young nor too old. Much of that sent to this country consists of bark of all ages, and is consequently not always to be relied upon. In preparing our Mistura Cascara Comp. we use only that bark which has arrived at proper maturity, thus ensuring the best results; the menstruum employed being the most suitable for extracting the aperient properties of the bark without causing precipitation when diluted. It is agreeably flavoured with Aromatic Syrup and forms an excellent remedy for Habitual Constipation when continued in doses of ʒ i.; or as an aperient or cathartic, in doses of ʒ ii. to ʒ iv.

"The value of Cascara Sagrada is now very generally recognised. Mackey, Mackey & Co.'s (Ltd.) Mistura Cascara Sagrada is evidently prepared from the finest selected material, and we confidently commend this excellent preparation to the notice of the profession."—THE LANCET, Aug. 26th, 1891.

Price 2s. 4d. per lb.

PREPARED ONLY BY

MACKEY, MACKEY & CO., LTD., Wholesale Druggists and Manufacturing Chemists.

175, GRANGE ROAD, BERMONDSEY, S.E.

TAMAR INDIEN GRILLON.

A laxative, refreshing, and medicated Fruit Lozenge, very agreeable to take, and never causing irritation. Its physiological action assures the immediate relief and effectual cure of

CONSTIPATION.

HÆMORRHOIDS, BILE,
CEREBRAL CONGESTION, HEADACHE,
LOSS OF APPETITE,
INTESTINAL OBSTRUCTIONS, &c.

By augmenting the peristaltic movement of the intestine without producing undue secretion of the liquids. Unlike pills and the usual purgatives, it does not predispose to intestinal sluggishness; and the same dose always produces the same effect—that is to say, never needs increasing.

It is recommended by the most eminent physicians of Paris, notably Drs. BELIN and TARDIEU, who prescribe it constantly for the above complaints, and with most marked success.

Wholesale—London: E. GRILLON, 47, Southwark Street, London, S.E.
Sold by all Chemists and Druggists, 2s. 6d. a box, stamp included.

VARALETTES EFFERVESCENT COMPRESSED TABLETS.

For convenience in preparing solutions of drugs to ensure immediate assimilation and full activity.

Piperazine Citrate ... 3 grs. & 6 grs.
Lithia Citrate ... ... 5 grs.
Lithia & Potash Citrates.. 3 & 5 grs.
Urotropine ... ... 4 grs.
Vichy. | Carlsbad.
Kissingen. | Friedrichshall.
AND OTHERS.

BRISK EFFERVESCENCE.
IMMEDIATE AND COMPLETE SOLUBILITY.
PALATABLE DRAUGHT.
EXACT DOSAGE.

Price List, Free Samples, and Literature relating to above from

ALFRED BISHOP, Limited, 48, Spelman Street, London, E.

AIROL "ROCHE."

AN ODOURLESS SUBSTITUTE FOR IODOFORM. English Patent No. 22,902.

THIOCOL "ROCHE."

English Patent No. 14,367.

A SOLUBLE GUAIACOL PREPARATION and A NEW REMEDY AGAINST TUBERCULOSIS.

Manufactured by **F. HOFFMANN—LA ROCHE & CO.**, BASLE, SWITZERLAND.

Sole Agent for Great Britain—HUGO LORENZ, 7-8, Idol Lane, London, E.C.

59

BARFF BORO-GLYCERIDE KREOCHYLE

ANTISEPTIC : FOOD PRESERVER : LIQUID MEAT

KREOCHYLE CO., Viaduct House, Farringdon Street, London, E.C.

TRADE MARK.

BRIN'S OXYGEN.

Addresses—
BRIN'S OXYGEN COMPANY, Limited, 34, Victoria Street, WESTMINSTER, S.W. Telephone 3111. Works—69, Horseferry Road, Westminster, S.W.
MANCHESTER OXYGEN COMPANY, Limited, Great Marlborough Street, MANCHESTER. Telephone 2538.
BIRMINGHAM OXYGEN COMPANY, Limited, Saltley Works, BIRMINGHAM. Telephone 2587.

BLAKE, SANDFORD & BLAKE,

ORIGINAL MAKERS OF

STANDARD STRENGTH LITHIA (5 grs.), **POTASH** (15 grs.), **SODA** (15 grs.), **CITRATE of POTASH** (30 grs.), & **MINERAL ACID TONIC WATERS.**

47, PICCADILLY, LONDON, W.

VERNISOL

(REGISTERED).

A WATER-SOLUBLE SKIN VARNISH.

VERNISOL is a tenacious jelly, which, when evenly distributed on the skin, dries in a few moments, leaving a transparent flexible coating.

For the exhibition of remedial agents in which inunction is not required, VERNISOL offers the most cleanly and economical method of application. Among its many advantages are its absolute freedom from irritating properties, and the readiness with which the dry pellicle may be washed off with water.

VERNISOL is miscible with powders, aqueous and spirituous liquids, fats, and also with fixed and volatile oils.

Supplied in Collapsible Tubes. Write for Sample and List of Combinations kept ready.

Invented and made by JOHN BELL & CO., Analytical & Pharmaceutical Chemists

225, OXFORD STREET, and 2, 4, 6, HILL'S PLACE, LONDON W. [Established over a Century.

"LIQ. SANTAL FLAV. c. BUCHU ET CUBEBÆ"

(HEWLETT'S).

THE ORIGINAL PREPARATION.

Report of "THE PRACTITIONER":—

"Experience has shown this preparation to possess *the same efficacy as Santal Oil itself.* It mixes perfectly with water, and has a taste by no means disagreeable, in which particular it contrasts very favourably with the ordinary mixture it is intended to replace."

To ensure obtaining this preparation, please write: "Liq. Santal Flav. c. Buchu et Cubebæ (Hewlett's)."

Price 10s. 6d. per lb. packed, for dispensing only, in 10, 22, 40, and 90-oz. Bottles.

INTRODUCED AND PREPARED ONLY BY

C. J. HEWLETT & SON, Wholesale & Export Druggists,

40, 41, & 42, CHARLOTTE STREET, LONDON, E.C.

MEDICAL MEN

Are invited to apply to **DURANT & CO.**, of Rosebery Avenue, London, E.C., for a **FREE SAMPLE** of their

"DYLISSIA"

MEDICAL CREAM,

which will aid them in prescribing for **Eczema, Skin Irritation, &c.**

PULVIS JACOBI VER., | **NEWBERY.**

This is the ORIGINAL ARTICLE from the recipe in DR. JAMES'S OWN HANDWRITING in the possession of MESSRS. NEWBERY

Prices for Dispensing: 1 oz., 9s.; ½ oz., 3s. 4d. 1, King Edward-st., Newgate-street, E.C.; 125 years in St. Paul's Churchyard.

SLINGER'S NUTRIENT SUPPOSITORIES,

Consisting of nearly pure Peptons and Extractive from the Artificial Digestion of Meat. Five Suppositories contain the Extractive of 20 ounces of Meat, in addition to the Peptone. R. H. BOUCHIER NICHOLSON, Esq., Hull Infirmary, in a case of Gastrostomy, says: "The best suppositories (made by SLINGER & SON, York) were of much benefit, the man saying he felt great comfort from their use. The man was saved the pangs of starvation, from which he was fast sinking, when I first saw him." Manufactured only by SLINGER & SON, Wholesale Druggists, York. Wholesale Agents: Messrs. NEWBERY & SON, 1, King Edward-street, Newgate-street, London, E.C.

"G. B." DIABETES WHISKY.

48/- PER DOZEN, CARRIAGE PAID.

THE LANCET Analysis post free.

GEORGE BACK & CO., Devonshire Square, BISHOPSGATE, LONDON. Telegrams—"Diabetes, London."

RED WHITE & BLUE COFFEE.

DELICIOUS FOR BREAKFAST AND AFTER DINNER.

In making, use *less quantity*, it being so much stronger than ordinary coffee.

SOLD EVERYWHERE.

ARCHER'S PURE DRY OLD COGNAC BRANDY.

Specially recommended by THE LANCET for its medicinal value.

(Full Report and Analysis post free.)

66/- PER DOZEN, CARRIAGE PAID.

EDWARD ARCHER & CO.,

BRANDY IMPORTERS, MALVERN. Established 1835.

AU GRAND MONARQUE CIGARS.

BEST VALUE IN THE MARKET.

15s., 20s., 25s., 30s. 100. Small Cheroot, 6d.

SEND FOR SAMPLE SHILLING'S WORTH.

BENSON & CO., Sole Importers, 61, St. Paul's Churchyard, London.

Prepared from the Original Formula of Sir A. B. GARROD.

R. HOGG & SON, 1, Southwick St., W.

Sold in Bottles and Syphons.

HOGG'S LITHIA WATERS.

BUCHANAN BLEND

SCOTCH WHISKY

JAMES BUCHANAN & CO.

SCOTCH WHISKY DISTILLERS.

By Appointment to

H.M. THE QUEEN

AND H.R.H.

THE PRINCE OF WALES.

BRAND & CO.'S MEAT JUICE.

The Juice of the FINEST SELECTED ENGLISH MEAT in its Natural State, containing the Albumen uncoagulated, together with the other NUTRITIVE PROPERTIES READY FOR IMMEDIATE ASSIMILATION.

Of ALL CHEMISTS, or direct of **BRAND & CO., LTD., MAYFAIR, W.**

ROBINSON'S ORIGINAL CONCENTRATED WATERS.

(ESTABLISHED 1855.)

When diluted in the proportion of one part to forty parts of water at 60° temperature, they faithfully represent the Medicated Waters of the British Pharmacopœia. They are always of uniform strength, and will keep good any length of time in any climate.

Aqua Amygd. Amar. Conc. (U.S.) ...	4/-	per lb.	Aqua Cassiæ Conc.	4/-	per lb.	Aqua Menth. Virid. Conc.	4/-	per lb.
,, Anethi Concent.	4/-	,,	,, Flor. Aurant.	5/6	,,	,, Pimentæ ,, ...	4/-	,,
,, Anisi ,, ...	4/-	,,	,, ,, Sambuci Conc.	1/6	,,	,, Pulegii ,, ...	4/-	,,
,, Camphoræ ,, ...	4/-	,,	,, Foeniculi Conc....	4/-	,,	,, Rosmarini ,, ...	4/-	,,
,, Carui ,, ...	4/-	,,	,, Menth. Pip. Conc.	4/-	,,	,, Rosæ ,, ...	5/6	,,
,, Cinnam. Ver. Conc.	6/-	,,	,, ,, Ang. Conc. ...	6/-	,,	,, ,, Virgin ,, ...	14/6	,,

The above may be had in ½-lb. or 1-lb. Bottles and upwards, through most of the Wholesale Drug Houses.

Each Bottle has the Inventor's Protection Label over the cork, without which none are genuine.

SAMPLES OF ANY OF THE ABOVE SENT FREE ON APPLICATION FROM

B. ROBINSON, Pharmaceutical Chemist and Distiller, Pendleton MANCHESTER.

CONTREXEVILLE

Be Careful to specify :

SOURCE DU PAVILLON

GOUT, GRAVEL, DIABETES, ARTHRITISM

(Diuretic, Tonic, Digestible)

The Contrexéville Mineral Water (Pavillon SPRING) is a diuretic and laxative, a tonic, a stimulant, and aid to digestion. — It acts upon the secret mechanism of nutrition, as is proved by its influence in checking the production of uric acid and glucose : it favourably modifies those morbid processus of biological chemistry which result in the accumulation of uric acid in the blood, inducing the phenomena of gout. — It facilitates the elimination of urinary deposits, by contracting the ducts containing them and increasing the quantity of liquid by which these vessels are flushed. — It assists the cicatrization of the inflamed mucus of the urinary organs, and helps to restore the normal acidity of the urine; facilitates the flow of the bile, by causing contraction of the biliary ducts and the expulsion of calculi: and is invaluable in the treatment of congestion of the liver.

Samples free to Members of the Medical Profession on application to INGRAM & ROYLE, *East Paul's Wharf, 21, Up. Thames St., E.C.*

SPECIALITIES FOR INVALIDS.

(Strongly Recommended by the Medical Faculty.)

REAL TURTLE SOUP

(Guaranteed made from the Live Turtle only),

10s. 6d. per pint.

CONSOMMÉ DE VOLAILLE,

3s. per pint,

And all KINDS of LIGHT COMESTIBLES,

SUPPLIED BY

V. BENOIST,

86, PICCADILLY, LONDON, W.,

Purveyor by Special Appointment to HER MAJESTY THE QUEEN and H.R.H. THE PRINCE OF WALES.

Particulars on application.

STOWER'S LIME JUICE CORDIAL.

NO MUSTY FLAVOUR.

As supplied to Her Majesty and both Houses of Parliament, the Orient Line, P. & O. Line, Pacific Steamship Co., &c., &c.

ABSOLUTELY PURE AND NON-ALCOHOLIC.

SAMPLE POST FREE on application to the Sole Proprietor,

A. RIDDLE & CO., 36 & 38, Commercial St., London.

NATURAL MINERAL WATERS. PURE AERATED WATERS.

RICHARD DAVIS, 20, Maddox St., Regent St.
IMPORTER AND MANUFACTURER.

Send for copy of THE LANCET Report.

W. HILL & SON,
60,
BISHOPSGATE
STREET,
E.C.

PATENT
MALTED NURSERY BISCUITS.

These Biscuits are Malted, as recommended by BARON LIEBIG. Infants fed upon this Food, which is at once comforting and nourishing, are always happy and good-tempered, sleep well at night, do not cry, and thrive amazingly.

"The introduction of Malt into Biscuits for Nursery use is a great improvement. The Biscuits are delicious in flavour and very easy of digestion."—THE LANCET.

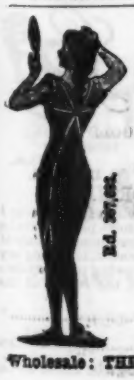
SAMPLES SENT FREE ON APPLICATION.

Sold in 2s. Tins, in Packets at 10d., and in Powder in 11d. Boxes.

THE
"KENTBURY" PATENT MEDICAL BAG
or Carrying INSTRUMENTS, &c. Constructed without protruding frame or gussets. Fitted for Doctor's requirements. Contents never get displaced or damaged. Will stand open with back to patient. Best Quality Cowhide, leather lining, hand-sewn. 12-in., 37/6; 14-in., 42/6 15-in., 48/-. And from 12/-.

Detailed List Free.

Patentees & Sole Makers—H. C. SCALES & CO., 82, HATTON GARDEN, LONDON, E.C.



"PORTIA"
COMBINED
STOCKING - SUSPENDER AND SHOULDER - SUPPORT.
(PATENT APPLIED FOR.)

Adaptable to any figure by adjustment of CENTRE-CLIP.
Recommended for those with Round Shoulders or Contracted Chest; also for use during CYCLING, TENNIS, GOLFING, SCULLING, and in GYMNASIUMS.
Very useful for Little Boys.
Can be worn with Elastic Stockings.
Three sizes—Adult's, Maid's, Children's.
Made in both white and pink elastic.

PRICE 3/-

Reg. No. 397,252.

To be obtained from all Surgical Instrument Makers.

Wholesale: THE "PORTIA" CO. Office & Works: 202, Romany Road, West Norwood, Surrey.

BELT ATTACHMENT IN USE.

BELT ATTACHMENT NOT IN USE.

HAMILTON'S
CAPOTE ULSTER,
FOR THE MEDICAL PROFESSION.
In HARRIS TWEEDS, HOMESPUNS, SCOTCH CHEVIOTS, &c.
LINED THROUGHOUT TATTERSALL CHECK.

£3 18s. 6d.

Two measures only required—CHEST and HEIGHT.

DESCRIPTION.—These Coats are made either single or double-breasted and by a special arrangement of the Belt at back can be worn as an ordinary loose Overcoat or Ulster at will. With the Belt Attachment not in use it is a very comfortable Walking Coat; whilst with the Belt Attachment (which can be arranged for medium or tight buttoning for travelling or driving) it has no equal. For the latter purpose *any material* can be made absolutely waterproof, but not air-proof. As stated above, this Coat is *lined throughout* with a warm material, and is not a mere skeleton coat without linings, as so many are, but will be found a genuine, well-made, useful garment which will last for years.

Above is in addition, and not in place of, our
DOCTOR'S CAPOTE,
which we make all the year round as under:—

LIGHT WEIGHT:	MEDIUM:	HEAVY:
£2 : 12 : 6.	£3 : 3 : 0.	£3 : 13 : 6.

Two measures only required—Chest and Height.
Forwarded against Remittance to any part of the World.
Made in BLACKS, GREYS, DRABS, &c., &c.
PATTERNS and Particulars by return.

TRADE MARK REG'D

HAMILTON'S CELEBRATED
"ELASTIC"
DRESS SUIT
LINED THROUGHOUT SILK.
£5·5·· CASH

GUARANTEED BEST VALUE IN LONDON.
Gentlemen well dressed in other respects at a considerable saving on West End prices.
Patterns and Illustrations free.

HAMILTON & CO.,
CIVIL & COURT TAILORS,
10, GEORGE STREET,
HANOVER SQUARE, W.
(Opposite St. George's Church.)

CORKS! CORKS!! CORKS!!!

Cloth-covered Sample Case of Corks (containing 2½ gross) of various sizes post free for 2s. 6d.
Leather-bound Case, containing 12 gross Assorted Corks, suitable for 3 oz., 4 oz., 6 oz., 8 oz., 10 oz., 12 oz. Bottles, post free for 9s.

AYRTON & SAUNDERS, 34, HANOVER ST., LIVERPOOL.

CURRY & PAXTON,

OPHTHALMIC OPTICIANS,

And at LIVERPOOL and BRISTOL. 195 to 199a, GT. PORTLAND ST., LONDON;

NOTE ☞
All Ophthalmoscopes and Ophthalmic Instruments manufactured by Curry & Paxton have their name legibly engraved on same. None are genuine where the name is omitted.

IMPROVED MEDICAL BATTERY AND ACCESSORIES.

The Best Secondary Battery for Actuating X-Ray Coils, for Working Motors and Cautery Instruments, and for Running Electric Lamps for Carriage Lighting or for General Medical Purposes.
Also, Improved Variable Resistances and Combined Pole-finding and Charging Boards for use with the above Batteries.

SOLE MANUFACTURERS AND PATENTEES—
NIBLETT, SUTHERLAND & MARCUSON, 61, Chandos Street, Strand, London, W.C.

BY ROYAL LETTERS PATENT, No. 18,713.—DECEMBER 20TH, 1888.

GODFREY'S

CHLORIDE OF AMMONIUM INHALER.

CATARRHAL THROAT AND EAR AFFECTIONS.

Loss of Voice, Bronchial Asthma, and Hay Fever.

THE SIMPLEST FORM OF INHALER. VERY PORTABLE. CONTAINS NO WATER.

SILVER MEDAL, BRUSSELS EXHIBITION, 1888.

Price 7s. 6d., Retail. Medical Profession, 5s. 6d.—Post, 6d. extra.

Illustrated Prospectus, with the "History of Chloride of Ammonium as a Remedial Agent," free by post.

Sole Makers—GODFREY & COOKE, 30, Conduit Street, Bond Street, London, W.

Obtainable on "The Times" NOVEL PLAN OF

20 MONTHLY PAYMENTS.

BENSON'S ENGLISH £25 "DOCTOR'S" WATCH.

For MEDICAL MEN. The Cheapest ENGLISH Centre Seconds Watch ever produced, at £25. *Crest or Monogram Engraved Free.*

CASH PRICE.

In 18-ct. Gold Hunting, Half-Hunting, or Crystal Glass Cases.

GOLD ENGLISH LEVER, HALF-CHRONOMETER,

CENTRE SECONDS.

£25

Best Make, Breguet Sprung and Adjusted, with Strong Keyless Action and long Centre Seconds Hand. *A Written Warranty for Correct Performance and Manufacture is given with each Watch.*

GOLD MEDAL, Inventions Exhibition, LONDON.

CATALOGUES AND ORDER FORMS FREE.

"The Times" ENCYCLOPÆDIA ORDER FORM.

I enclose £1 5s. Please send me a "Doctor's" Watch, price £25. The balance of which sum I agree to pay you, or any one you appoint, at the rate of £1 5s. a month; my next payment to be made upon the delivery of the watch, and my succeeding payments on the corresponding day of each month following. Until such payments are complete, I engage that the watch, not being my property, shall not be disposed of by sale or otherwise. I further agree that if, owing to unforeseen circumstances, of which you shall be the judge, the watch cannot be delivered, the return of the deposit of £1 5s. to me shall cancel this order.

Signed (in full) ..... Date.....

Address .....

J. W. BENSON, Ltd., 25, Old Bond Street, W., and 62 & 64, Ludgate Hill, E.C.

The ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH.

ESTABLISHED 1877.

12, PALL MALL EAST, LONDON, S.W.

Trade Mark Regd.

Telegraphic Address: "*DARQUE, LONDON.*"

Office hours, 10 till 4; Saturdays, 10 till 2.

GLYCERINATED CALF. PURE and RELIABLE.

THE NEW CHARGED PIN-POINT, PROVISIONALLY PROTECTED.

SAMPLE FREE **C. P. P.** ON APPLICATION.

This instrument, sufficient alone for an aseptic vaccination with Glycerinated Calf Vaccine, supersedes the use of tubes and their necessary auxiliaries. From the **1st Feb. to the 20th Dec., 1899,** included, **184 Adults,** vaccinated only in childhood, were revaccinated by the Divisional Surgeon of the A Division of Metropolitan Police at New Scotland Yard; from **552 insertions, 534 vesicles, or 96·7 per cent. vesicles per insertions,** were obtained. **C.P.P. and S.V. Tubes 6d. each (one only 7d. each). Tubes 2s., Half Tubes 1s. Pin Points, 1s. per dozen.**

P.O.O. (including postage, and crossed London and Westminster Bank) with orders payable to EDWARD DARKE, Secretary.

DR. HIME'S GLYCERIZED CALF VACCINE.

(As prepared by him for many years and recently adopted by THE LOCAL GOVERNMENT BOARD.)

PRICE.—Tubes: for one child, 6d. each; for three children, 1s. each; 3 ditto, ditto, 2s. 6d. Conserve, in Vials, 2s. 6d., 5s. (according to size). Postage 1d. Other preparations as ordered. *Special arrangements for large quantities and contracts.*

Telegraphic Address—"HIME, BRADFORD."

REBMAN'S GLYCERINATED PURE CALF LYMPH,

1/- and -/6 per Tube.

ANTIDIPHTHERITIC SERUM (Liquid) 1/6, 2/3, and 3/- per Flask of 1000 units.

ANTIDIPHTHERITIC SERUM (Dried), 2/3 per Flask of 1000 units.

ANTISTREPTOCOCCUS SERUM (Liquid or Dried), 2/6 per Flask of 10 c.c.

Offices: 129, SHAFTESBURY AVENUE, CAMBRIDGE CIRCUS, LONDON, W.C.

Telegraphic Address: "SQUAMA, LONDON."

Telephone Number: "2026 Gerrard."

BRITISH CALF VACCINE INSTITUTION,

Russell-villas, Willoughby-road, Twickenham, near Richmond-bridge.

Director: WM. FAULKNER, M.R.C.S.

GLYCERINATED CALF LYMPH,

Guaranteed of Exceptionally Pure Quality

Put up in Tin Cases containing 1 large tube (2—4 vaccinations) ... per case 1/-

Put up in Tin Cases containing 6 large Tubes (2—4 vaccinations each) per case 5/-

Sent Post free on receipt of Postal Order or Stamps.

UNSATISFACTORY TUBES EXCHANGED FREE OF CHARGE.

Specially packed for Export at same prices. Postage extra.

Sole Wholesale Depôt:—

BURGOYNE, BURBIDGES, & CO.,

16, COLEMAN STREET, LONDON, E.C.

Telegraphic Address: "Cyriax, London."

Prepared strictly in accordance with the methods advocated by Dr. S. Monckton Copeman.

JENNER INSTITUTE

ASEPTIC GLYCERINATED CALF LYMPH

Free from ERYSIPELAS & TUBERCLE.

Tubes, 1s. each, 10s. per dozen; Half Tubes, 3 for 1s. 6d. Postage 1d.

Telegraphic Address: "*SILICABON, LONDON.*"

Postal Orders and Cheques to be made payable to JAMES DOUGLAS.

JENNER INSTITUTE FOR CALF LYMPH, 72, Church Road, Battersea, London, S.W.

Wholesale Agents: Allen & Hanburys, Ltd., Plough Ct., Lombard St., E.C.

THE BIRMINGHAM CALF LYMPH.

204, VICTORIA ROAD, ASTON, BIRMINGHAM.

Director—JOHN ROUND, L.R.C.P.

1 large Tube Glycerinated Lymph, 1s.; 3 for 2s. 6d.
2 small Tubes " " 1s.; 6 for 2s. 9d.
Conserve, 2s. 6d.

All this Lymph is examined in the Bacteriological Laboratory of Mason's College.

Sent on receipt of remittance by the Director, or by the Wholesale Agents,

WYLEYS LIMITED COVENTRY.

Faulkner's & The British CALF VACCINE INSTITUTION,

16, ENDELL STREET, BLOOMSBURY, and 1, RUSSELL VILLAS, EAST TWICKENHAM.

Established 1860.

GLYCERINATED CALF LYMPH, most Reliable and Pure. Tubes 1s. and 2s. each; 10s. per dozen. Smallest Tubes 6s. per dozen. Failures replaced half price.

VACCINE BLOWERS or EJECTORS, 1s. each, on receipt of remittance.

DR. RENNER'S ESTABLISHMENT

for VACCINATION with CALF LYMPH,

186, MARYLEBONE ROAD, LONDON, N.W.

The Oldest Original Calf Vaccine Institution in this country.

Prices for Calf Lymph (GLYCERINATED):—

Tubes ... { Large ... ... 2s. each or 3 for 5s. 0d.
Small ... ... 1s. each or 3 for 2s. 6d.
" (sufficient for 1 Vaccination only) 2 for 1s. or 6 for 2s. 6d.
Squares ... ... 2s. 6d. each.

Registered Telegraphic Address—"Vaccine, London."

Sent on receipt of remittance addressed to the Manager of the Establishment or the appointed agents.

For Varicose Veins & Weakness.

—SURGICAL ELASTIC STOCKINGS and KNEE-CAPS, pervious, light in texture, yielding an efficient and unvarying support without the trouble of lacing. Likewise a strong, low-priced article for Hospitals and the Working Classes.

ABDOMINAL SUPPORTING BELTS.—Those for Ladies' use before and after accouchement are admirably adapted for giving adequate support with *extreme lightness*, a point hitherto little attended to.

Instructions for measurement and prices on application, and the articles sent by post.—POPE & PLANTE, Hosiers by appointment to the Queen, 393, OLD BOND STREET, LONDON, W. (late of Regent Street) The Profession, Trade, and Hospitals supplied.

LIST OF A FEW SPECIALITIES MANUFACTURED BY

EDWARD HUXLEY, 13, OLD CAVENDISH ST., W.

ABDOMINAL BELTS FOR PREGNANCY, OBESITY, PROLAPSUS UTERI, &c.
SURGICAL SPIRAL STOCKINGS, KNEE CAPS, &c.
HUXLEY'S IMPROVED PATENT MOCMAIN TRUSS WITHOUT SPRING.
TRUSSES FOR IMPROVED TREATMENT OF SCROTAL HERNIA.
HUXLEY'S TRUSS FOR INFANTILE HERNIA.
HUXLEY'S TRUSS POR VARICOCELE.
SUPPORT FOR PROLAPSUS ANI (CHARRIÈRE).
HUXLEY'S SUPPORT FOR SACRO-ILIAC DISEASE.
HUXLEY'S SUPPORT FOR RIDER'S SPRAIN.
HUXLEY'S PATENT CEINTURE FOR HORSEWOMEN.
IMPROVED URINALS FOR MALE AND FEMALE.

ILLUSTRATED CATALOGUES ON APPLICATION.

MILNE'S ANTISEPTIC LIGATURES.

IN STRAIGHT LENGTHS.

CATGUT SILK AND HORSE HAIR.

SULPHO-CHROMIC AND SILKWORM GUT.

These most reliable and convenient Ligatures are protected by Royal Letters Patent, and Surgeons should see JOHN MILNE'S name on every package so as to avoid purchasing cheap and inferior imitations.

JOHN MILNE, THE GALEN MANUFACTURING CO., LTD., LADYWELL, LONDON, S.E.

BRUCE'S SAFETY PARABOLIC REFLECTOR LAMP

With SAFETY TUBE and FILLER at Side.

4/3

(Carriage Paid per parcels post.)

All Nickel-plated, 1s. 3d. extra.

The Vessel is made of Brass and the Reflector Silver-plated.

To Medical Practitioners in the Country and Abroad where gas or electric light is not available, OUR LAMP is of thorough practical use. As supplied and used in GUY'S HOSPITAL for the past six years. Send for Illustrated List. Can be had from the Wholesale Druggists, Surgical Instrument Makers, or direct from

F. & J. BRUCE, 232, Borough High St., LONDON S.E.

COPPER STERILIZER

(Nickel-plated),

With LIFT-OUT RACK for KNIVES. Complete with LAMP and SPIRIT CONTAINER.

The Lamp, Rack, and Container are packed in the Sterilizer, the legs folded underneath, making it portable and small.

Size $6\frac{1}{2} \times 3\frac{3}{4} \times 1\frac{1}{2}$. Price 15s.

EVANS & WORMULL,

81, STAMFORD STREET, LONDON, S.E.

Instrument Makers to the Army, Navy, and Indian Governments, and various Hospitals.

Complete Hospital Furnisher

BY SPECIAL APPOINTMENT Invalid and General Furniture Manufacturer to the British Home for Incurables.

CARTER

Illustrated Catalogues POST FREE.

Makers to The Queen, Prince of Wales, and late Emperors of Russia and Germany.

6A, NEW CAVENDISH ST.

PORTLAND PLACE, LONDON, W.

Operating and Dressers' Tables.
Reclining Boards, 25/-
Walking Machines.
Portable W.C.'s.
Air and Water Beds.
Urinals, &c.
Electric Bells.

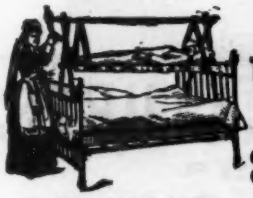
Literary Machine,

For holding a book or writing desk in any position over an easy chair, bed or sofa, obviating fatigue and stooping. Invaluable to Invalids & Students. Prices *from* **17/6**

Bed Rests 7/6
Leg Rests 10/-
Crutches 10/6
Bed Baths 12/6
Commodes £1 5

Adjustable Couches and Beds from **£1 15s.**

INVALID COMFORTS



Bed Lifts £4 4s.

Carrying Chairs from £1.

Self-Propelling Chairs from £2 2s

AMBULANCES—Hand or Horse.
Best in the world

Used by H.M. Govmt.

Adopted by the Hospitals Association for the Street Accident Service of London.

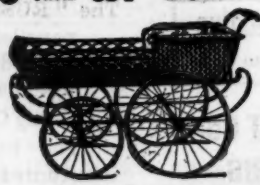
Breakfast-in-Bed Tables 30/-

BATH CHAIRS FROM £1 5s.

20 Gold Medals and Awards.

Bath Chairs for Hand or Pony.

Adjustable Bath Chair or Spinal Carriage



Spinal Carriages.

NOTICE.—The business of Messrs. Alfred Carter (Ltd.), of Holborn Viaduct and Shoe-lane, is now amalgamated with that of John Carter, and henceforth they will trade under the style of Messrs. Carter. All communications should be addressed to 6a, New Cavendish Street, Portland Place, W.

MONTHLY CATALOGUE of SECONDHAND and NEW SURGICAL INSTRUMENTS, OSTEOLOGY, MICROSCOPES POST FREE.

Student's Half Sets of Osteology, £1 10s., £2 2s., £2 10s. Secondhand Surgical Instruments Osteology. Microscopes bought. Articulated Skeletons lent on hire. Crutches on hire.

MILLIKIN & LAWLEY, 165, STRAND, LONDON.

UNIVERSAL TUBULAR WATER AND AIR BED

Prize Medals Sanitary Congress, 1878. Industrial Exhibition, York, 1879. Certificate of Honour, Sanitary Congress, 1879.

Brighton, 1881
International, 1881.
Kensington, 1882.

POCOCK BROTHERS,
Patentees and Sole Manufacturers,
235, SOUTHWARK BRIDGE ROAD, LONDON.

Consists of a series of separate and distinct cylinders, any diameter and suitable length, made of Waterproof material either for Water or Air, fitting into a case which keeps them side by side, but slightly apart.

1. In cost it is less expensive.
2. It is warm and light, and well adapted for a camp or field-bed, being waterproof.
4. It is quickly filled and easily adjusted.
4. It admits of ventilation in the space between the tubes.
5. It can be regulated so as to relieve pressure from any part required.
6. By the addition of tubes it will raise one part of the body higher than the rest.
7. By the temporary removal of one or two tubes it affords room for the introduction of a bedpan.
8. It can be inclined to any angle (even when filled with water) to suit the condition of the patient.
9. It is free from noise and surging, so disagreeable to the invalid on changing his position on a water-bed.
10. In case of injury to the tube it can be withdrawn, and a fresh one substituted at a trifling cost, and without loss of time whereas the ordinary water-bed, if injured in any part (from being in one compartment), is rendered useless.
11. In the treatment of invalids, especially the insane, who are paralysed and have no control over their evacuations, they cannot lie in a pool of wet, the fluid passing away between the tubes.

ITS ADVANTAGES OVER ORDINARY WATER OR AIR BEDS ARE AS ABOVE.

MAPLE & CO

MANUFACTURERS OF FURNITURE

The LARGEST SELECTION of

FURNITURE

FOR

CONSULTING ROOMS and LIBRARIES in the World

TURKEY CARPETS

LINOLEUMS AND CORK CARPETS

Estimates Free

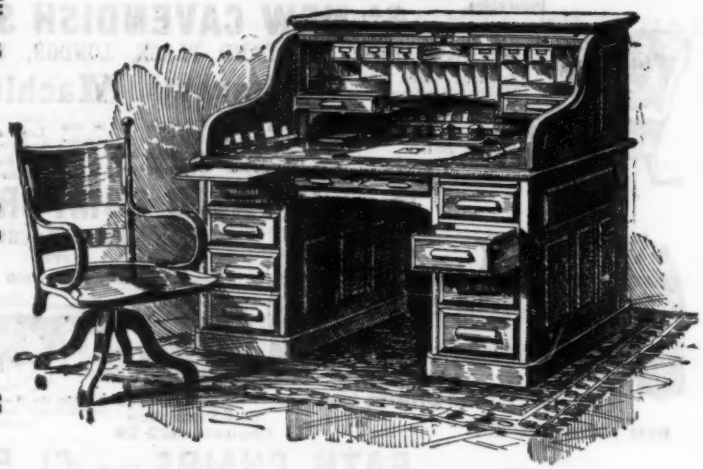
REALLY RESTFUL BEDDING

Price List Free

TOTTENHAM COURT ROAD

LONDON & PARIS

THE "RUSSELL" SHUTTER-FRONT WRITING-TABLE

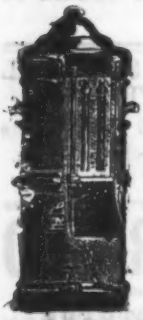


The "RUSSELL" WRITING-TABLE in Oak, with panelled sides and back, and having numerous fitted drawers, pigeon-holes, slides, &c., the whole automatically closing with one operation, 4ft. 2in. £6 6 0

Revolving Chair to match 1 2 6

"The 'Russell' Table is just the thing for a busy and oft-interrupted man."—D.Q.S.

THE PASTEUR CHAMBERLAND FILTER.



The only Filter proved to afford Protection against Water-borne Disease.

This statement is made on the results officially recorded of the use of over 200,000 since 1888, which are confirmed by all Laboratory experiments A précis of the evidence will be forwarded on application.

Made to give any required supply either with or without pressure.

THE EQUIFEX DISINFECTION APPLIANCES.

(GENESTE-HERSCHER, &c., PATENTS.)

STEAM STOVES.—The only stoves complying with the Recommendations of the International Sanitary Congress (Budapesth, 1894). Only Medal, Sanitary Institute Congress, Liverpool, 1894; Only Highest Award wherever exhibited.

SPRAYERS.—Cost a fraction of the time and expense required in use of SO^2, render disturbance of inmates unnecessary, and disinfect with certainty. Exclusively used by the Municipality of Paris and elsewhere.

PARTICULARS OF OTHER APPLIANCES ON APPLICATION.

SOLE LICENSEES AND MAKERS:

J. DEFRIES & SONS, Limited, Sanitary Dept., London, E.C.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC,

22, CHENIES STREET, GOWER STREET, W.C.

JANUARY TERM, 1900, commences **MONDAY, JAN. 15th;** ends **FRIDAY, FEB. 23rd.**

CLINICAL CONSULTATIONS: at 4 p.m.	Mondays, (Skin)	Tuesdays, (Medical)	Wednesdays, (Various)	Thursdays, (Surgical)	Fridays. (Eye, Ear & Throat)

PRACTICAL CLASSES.

APPLIED ANATOMY (MEDICAL AND SURGICAL): PHYSICAL DIAGNOSIS... ... ... } DR. SEYMOUR TAYLOR, MR. JAS. CANTLIE.
Tuesdays and Thursdays, 6 P.M., commencing Tuesday, Jan. 16th. Fee £2 2s.

CLINICAL EXAMINATION OF THE NERVOUS SYSTEM. Fridays, 2 to 3 P.M. ... ... } DR. HARRY CAMPBELL.
Commences Friday, Jan. 19th. Fee £1 1s.

PRACTICAL APPLICATION OF RÖNTGEN RAYS. Thursdays, 3 P.M. ... ... } MR. VERNON CARGILL.
Commences Thursday, Jan. 18th. Fee £2 2s.

PRACTICAL OTOLOGY. Mondays, 5 to 7 P.M. ... ... } DR. DUNDAS GRANT.
Commences Monday, Jan. 15th. Fee £2 2s.

PRACTICAL RHINOLOGY AND LARYNGOLOGY. Wednesdays, 5 to 7 P.M. ... ... } DR. STCLAIR THOMSON.
Commences Wednesday, Jan. 17th. Fee £2 2s.

PRACTICAL OPHTHALMOLOGY, the USE of the OPHTHALMOSCOPE, and REFRACTION. } MR. VERNON CARGILL.
Fridays, 5 to 7 P.M. Commences Friday, Jan. 19th. Fee £2 2s.

LECTURES (Fee for each Course £1 1s.)

(Conditional upon a minimum number of entries being received.)

DISEASES OF THE EYE ... ... MR. MARCUS GUNN.
DISEASES OF THE SKIN... ... ...
COMPARATIVE PATHOLOGY ... ... DR. WOODS HUTCHINSON.
INSANITY: ITS MEDICAL AND LEGAL TREATMENT ... ... DR. SAVAGE.

LABORATORY AND CLINICAL CLASSES.

PRACTICAL BACTERIOLOGY. Fee £5 5s. ... PROF. CROOKSHANK.
CLINICAL BACTERIOLOGY. Fee £2 2s. ... PROF. CROOKSHANK.
HYGIENE AND PUBLIC HEALTH. Fee £2 2s. DR. WYNTER BLYTH.
MENTAL DISEASES. Fee £1 1s. ... ... DR. MAURICE CRAIG.

Complimentary ticket, admitting to the Polyclinic for three successive days, issued to any Practitioner upon presentation of visiting card, by the Medical Superintendent.

The names of those who wish to join any of the Classes, or to become Subscribers or Members of the Polyclinic, should be sent at once to Captain A. E. HAYWARD PINCH, F.R.C.S., Medical Superintendent.

The privileges of Subscribers are admission to the Afternoon Consultations, Clinical Demonstrations, and Clinical Lectures (but not to the Special Courses), to the Library, Museum, and Reading Room, and to receive free every month the "Polyclinic Journal." They are eligible to become Members without additional payment on approval by the Council, and then acquire votes at all the general meetings.

By a recent decision of the Council admission to the list of "Original Subscribers" will end with the current year. The Annual Subscription of Original Subscribers is One Guinea, but that of all Subscribers enrolled after Jan. 1st, 1900, will be Two Guineas.

GUTHRIE RANKIN, Dean.

NAVAL MEDICAL EXAMINATION.

Copies of Papers set for the above Examinations during recent years may be obtained of

Messrs. LARCOM & VEYSEY,
51 and 52, Queen-street, PORTSMOUTH.

THE LONDON SCHOOL OF TROPICAL MEDICINE

(Under the auspices of Her Majesty's Government),

CONNAUGHT ROAD, ALBERT DOCK, E.

IN CONNEXION WITH THE HOSPITALS OF THE SEAMEN'S HOSPITAL SOCIETY.

The next SESSION commences on Monday, January 15th, 1900.

A Travelling Scholarship of £300 will be offered to students of the School.

The Laboratories, Museum, Library, &c., are open daily.

Lectures on Tropical Medicine, Tropical Hygiene, and Surgery in the Tropics are delivered during the Session.

Clinical Instruction is given daily in the wards of the Hospitals.

Special arrangements for board will be made for those who may desire to reside on the premises.

For prospectus, syllabus, and other particulars apply to the Secretary, P. Michelli, Esq., Seamen's Hospital, Greenwich, S.E.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

IN CONNEXION WITH

UNIVERSITY COLLEGE

AND

ROYAL SOUTHERN HOSPITAL.

CLINICAL PRACTICE.—At the Royal Southern Hospital daily in the Tropical Wards and Clinical Laboratories.

LABORATORY WORK.—Daily in the Thompson-Yates Laboratories.

LECTURES.—Tropical Medicine thrice weekly.

COURSES.—Summer, Lent, and Autumn Terms.

FEE.—10 Guineas. Special arrangements for Board.

RESEARCH.—Special Facilities for Research and opportunities afforded of Organising Expeditions.

For prospectus and other particulars apply,
Chamber of Commerce, Liverpool. A. H. MILNE, M.A., Hon. Sec.

MEDICAL DEPARTMENT OF THE NAVY.
ADMIRALTY, Northumberland-avenue, W.C.
14th December, 1899.

An Examination of Candidates for entry into the Medical Department of the Royal Navy will be held on the 19th February next and following days at Examination Hall, Thames Embankment.

Not less than Sixteen Commissions as Surgeon will be offered for competition.

The forms to be filled up by Candidates will be supplied on application to this Department. H. F. NORBURY, Director-General.

JENNER INSTITUTE OF PREVENTIVE MEDICINE.

The next Session will commence on Monday, January 8th, at 11 A.M. The Laboratories are open for Investigation and Instruction. A Three Months' Course in Systematic Bacteriology will be given. The class will meet three times weekly at 10 A.M.

A Full Course in Hygiene (Bacteriology, Chemistry, and Sanitary Science) extending over six months will likewise commence on the above date.

Further particulars on application to the Secretary, Chelsea-gardens, S.W.

FACILITIES FOR CLINICAL STUDY

OFFERED TO QUALIFIED MEDICAL MEN BY METROPOLITAN SCHOOLS.

Joint cards of admission are issued to the Clinical Instruction of the following Metropolitan Hospitals and Schools of Medicine:—CHARING-CROSS, GUY'S, KING'S COLLEGE, MIDDLESEX, ST. GEORGE'S, ST. MARY'S, ST. THOMAS'S, UNIVERSITY COLLEGE, WESTMINSTER.

These cards will be available for qualified medical men (British, Colonial, or Foreign) only, and will be issued at the following rates:—

For Three Months ... ... 7 guineas.
For Six Months ... ... 10 ,,

And for any longer period at the further rate of 5 guineas for each additional six months.

A list of operations at the associated Hospitals may be seen each day at the Secretary's office.

The cards and further particulars may be obtained by writing to the Honorary Secretary, West Wing, Examination Hall, Victoria Embankment, London, W.C., or by personal application between the hours of 12.30 and 3.0 P.M., except on Saturdays.

Evidences of qualification must be furnished with application for cards.

St. Bartholomew's Hospital and COLLEGE.

FIRST F.R.C.S. CLASSES.

Special Classes in ADVANCED ANATOMY and PHYSIOLOGY for the First F.R.C.S. Examination in May will be held on Tuesdays, Wednesdays, and Fridays, commencing on January 9th, and continuing up to the Examination.

For particulars, apply to the Warden of the College, St. Bartholomew's Hospital, E.C.

The Middlesex Hospital Medical SCHOOL.

DEPARTMENT OF PUBLIC HEALTH AND BACTERIOLOGY.

A Six Months' Course of Laboratory Instruction on Public Health will commence in the first week of January.

Bacteriology by A. G. R. Foulerton, F.R.C.S., D.P.H. F. G. Thomson, M.B., Demonstrator.

Chemistry and Physics by the Lecturer on Chemistry.

The Course includes six months' out-door work with a metropolitan medical officer of health. Fee, £21.

For further particulars apply to W. Pasteur, M.D., Dean.

Royal Westminster Ophthalmic HOSPITAL, King William-street, Strand.

Patients are seen daily from 1 P.M., and Clinical Instruction is given.

For particulars of the various Classes and Lectures apply either at the Hospital or to Mr. ADAMS FROST, 30, Cavendish-square, W.

Fees, not exceeding six months, £3 3s. Perpetual, £5 5s.

POST-GRADUATE COURSE.

London Throat Hospital for Diseases of THROAT, NOSE, and EAR, 204, Great Portland-street, W.

Practical Demonstrations and Instruction daily at 2 P.M. Operations daily, 9.30 A.M.

Clinical Assistants are appointed for three months to take part in the work of the Clinics. Fee £2 2s.

Attendance on the practice of the Hospital free.

For particulars apply at the Hospital.

2ND CONJOINT and HALL.—The Special Course for the Jan. Exam. now on.

COOKE'S SCHOOL.—ANATOMY, PHYSIOLOGY, SURGERY (Operative) taught rapidly and practically.

Morning and Afternoon Classes; dissecting-room open from 9 to 5. Recognised (see prospectus) by the Conjoint and other examining Boards. Special Class for Dec. M.B. now on. Class for the May F.R.C.S. will begin shortly.—Apply to Secretary, 40, Brunswick Square, W.C. *Resident Students have the advantage of Private Evening Classes free of charge.*

MR. COOKE'S TABLETS OF ANATOMY, 11th Edition, now ready, thoroughly brought up to date, and with over 700 illustrations.

Royal London Ophthalmic Hospital, MOORFIELDS.

Gentlemen may enter to the Practice of THE ROYAL LONDON OPHTHALMIC HOSPITAL at any time, and are, on certain conditions, eligible for appointment as CLINICAL ASSISTANTS or as JUNIOR ASSISTANTS in January, April, July, and October, but, with the provisional sanction of one of the Surgeons, may commence work on entering.

Courses of Instruction in OPHTHALMOSCOPY, REFRACTION, EXTERNAL DISEASES, and SURGICAL ANATOMY of the EYE, commence in January, May, and October.

Perpetual Students of the Hospital may attend one course in each subject without extra fee. Other Students on payment of a separate fee for each course.

The Class of OPHTHALMOSCOPY is limited in number, and names are entered in order of application.

Systematic instruction is also given in the PATHOLOGY of the Eye.

Fees for the Practice:—

Perpetual	Five Guineas.
Six months or under	Three Guineas.

Clinical Work begins at 9 A.M. Operations are performed daily between 10 and 1.

ROBERT J. BLAND, Secretary of the Hospital.

THE SURGICAL AID SOCIETY.

CHIEF OFFICE—SALISBURY SQUARE, LONDON, E.C.

PRESIDENT:

THE RIGHT HON. THE EARL OF ABERDEEN, G.C.M.G.

This SOCIETY supplies Trusses, Elastic Stockings, Crutches, Artificial Limbs, Artificial Eyes, &c., and every other description of mechanical support to the poor, without limit as to locality or disease.

Sixteen Branches have been established in the Provinces.

WATER BEDS and INVALID CHAIRS and COUCHES are LENT to the AFFLICTED upon the RECOMMENDATION of SUBSCRIBERS.

Over 25,000 Appliances given in the year ending Sept. 30th, 1899.

Annual Subscription of 10s. 6d., or Life Subscription of 5 guineas, entitles to Two Recommendations per annum; the number of Letters increasing in proportion to amount of contribution.

SUBSCRIPTIONS and DONATIONS are earnestly solicited, and will be thankfully received by the Bankers, Messrs. Barclay & Co., Limited, Lombard-street, or by the Secretary at the Office of the Society.

RICHARD C. TRESIDDER, Secretary.

Epsom College.—Seven Entrance SCHOLARSHIPS of £30 each will be offered next July.—Apply, The Bursar.

DIPLOMA IN PUBLIC HEALTH.

King's College, London.

STATE MEDICINE LABORATORIES.

Prof. W. R. SMITH, M.D., D.Sc., F.R.S. Ed., Director.
Demonstrators:
EDWARD RUSSELL, B.Sc. Lond., F.I.C.;
A. E. PORTER, B.A., M.B., D.P.H.

The Laboratories are open daily from 10 to 4 (Saturdays, 10 to 1). Intending students are requested to call during those hours, when full information can be obtained relative to the Lectures, Demonstrations, Laboratory Work, and the various Public Health Examinations.

An inclusive fee covers Laboratory Work, Bacteriology, Out-door Sanitary Work, with Medical Officer of Health, and all subjects necessary for D.P.H., or the subjects may be taken out separately.

Visits are paid each week to places of Hygienic interest.

Special arrangements are made for those engaged in Practice.

The Course commences January 9th.

Prospectuses may be obtained from the Secretary.

BACTERIOLOGY.

Bacteriological Department, King's COLLEGE, LONDON.

Director, Professor CROOKSHANK.

The Laboratories are open daily for INSTRUCTION and RESEARCH, from 10 A.M. to 5 P.M. For syllabus of classes, apply to the Secretary.

For information and advice as to the course of instruction to be selected, application must be made in writing to Professor Crookshank, or an interview may be obtained by appointment.

SPECIAL CLASSES IN JANUARY.

Two complete courses of practical instruction for medical practitioners, veterinary surgeons, analysts, &c., will commence on Jan. 8th.

Demonstrations to the Morning Class (Dr. Newman, D.P.H.) will be given at 11 A.M. and to the Afternoon Class (Dr. Nash, D.P.H.) will be given at 2 P.M. three days a week, with practical work daily in the Laboratory for Thirty Days.

A class for candidates for the D.P.H. (Bacteriology) will commence on Jany. 8th, at 10 A.M., and a time-table arranged to suit the convenience of the class.

A Class in Clinical Bacteriology, consisting of demonstrations with practical work, will commence on Wednesday, Jan. 10th (2 to 3.30) and be held on successive Wednesdays for six weeks.

ST. JOHN AMBULANCE ASSOCIATION.

INVALID TRANSPORT SERVICE

(under the patronage of many leading physicians and surgeons), for the conveyance of sick and injured patients (infectious cases excepted) to and from all parts. The Association has a fully-trained Staff and all necessary appliances.—For particulars apply to the Transport Manager, St. John's Gate, Clerkenwell, E.C. Telegrams: First-aid, London. Telephone 861, Holborn.

FRAMLINGHAM COLLEGE, SUFFOLK.

President—Right Hon. Lord RENDLESHAM.
Vice-President—Right Hon. Lord HENNIKER.
Head Master—Rev. O. D. INSKIP, M.A., LL.D.

Public School, incorporated by Royal Charter. Fine site. Grounds nineteen acres. School Chapel, Chemical Laboratory, Detached Sanatorium, Carpenter's Shop, Gymnasium, Reading-room, Museum, Swimming and other Baths, &c. Highest fee, inclusive, £39 per annum. Next term begins January 17th, 1900. Three Entrance Scholarships for Competition, Jan. 18th. Illustrated prospectus on application.

ALBERT GATE RIDING ACADEMY,

Rutland Yard, KNIGHTSBRIDGE.

(The School opposite Knightsbridge Barracks; adjoins Hyde Park, Rotten Row, and Tattersall's.)

Experienced Masters are always in attendance, and well-trained Riding Horses and Park Hacks, Hunters and Chargers supplied on the Shortest Notice.

Special Care taken with Children. *Dressing Room for Ladies.*

GENTLEMEN PREPARING for the ARMY and CIVIL SERVICE exercised and trained in SWORDSMANSHIP by Sergeant-Major LANGRISH, late R.H.A.

FOR TERMS AND PARTICULARS, ADDRESS—

WM. WOOLLEY, Manager, Rutland Yard, KNIGHTSBRIDGE, S.W.

Advice as to Choice of Schools.—

The SCHOLASTIC, CLERICAL, and MEDICAL ASSOCIATION gives ADVICE and ASSISTANCE, without charge, to Parents and Guardians in the Selection of Schools (for Boys or Girls), and Tutors for all Examinations at Home or Abroad.—A statement of requirements should be sent to the Manager, 8, Lancaster-place, Strand.

M.A. Camb., B.Sc. Lond. (1st class

Honours), ASSISTS Gentlemen preparing for Intermediate Science and Preliminary Scientific Examinations, London, and for First Conjoint; also for 1st M.B. Oxford and Cambridge.—Address, H. B., 61, Torrington-square, Russell-square, W.C.

Triple Qualification, Edinburgh.—

Special Preparation, in Class, Privately, and by Correspondence, for these examinations. Also for Fellowship Examinations of Royal College of Surgeons, Edinburgh, and M.D. Brussels. Resident Pupils received.—Address, Class Rooms, 7, Chambers-street, Edinburgh.

D.P.H.—Edinburgh Classes.—High

percentage of Successes. Practical Chemistry, qualifying for the various Examining Boards, commences Jan. 9th. Practical Bacteriology commences Jan. 29th. The out-door sanitary work is done in the city. Any of the Classes may be taken independently. Further information and advice may be obtained from Mr. G. H. Gemmell, F.C.S., care of Tatlock and Readman, Chemical Laboratory, School of Medicine, 4, Lindsay-place, Edinburgh.

UNIVERSITY OF BRUSSELS.

Copies of the M.D. Regulations and information supplied by an M.D. Brux. The Class meets three days a week at 4.30 o'clock. Postal Course for Provincial Practitioners, with Practical Work in London before exam. At the June, 1899, Exam. all the successful candidates (5) were pupils.

Cantab., 33, Manchester-street, Manchester-square, W.

ROYAL ARMY MEDICAL CORPS, INDIAN MEDICAL SERVICE, NAVAL MEDICAL SERVICE.

The Classes for the February Competition recommence Monday, January 1st, at 11 A.M.

46, Great Ormond-street, W.C. H. R. JENNINGS, Secretary.

DEFECTS OF SPEECH.

MR. WILLIAM VAN PRAAGH'S System for the Cure of all Defects of Speech, both ACQUIRED and CONGENITAL. Consultations by appointment.—11, Fitzroy-square, London, W.

ALL PROFESSIONAL EXAMINATIONS.

M.B., B.Sc. Lond., University Scholar, First-class Honourman and Gold Medallist, prepares for all Medical Examinations privately, in small classes, or by correspondence. Clinical and practical work if desired. Special classes for the Services, Primary Fellowship, Cambridge M.B. (Parts II. and III.), and University of London Exams. (Pass and Honours). Tuition for M.D. Durham (15 years' standing) and M.D. Brux.—Address, Tutor, THE LANCET Office, 423, Strand, W.C.

EXAMINATIONS.

Classes are held for the various Conjoint and Hall Examinations. Also for the M.R.C.P. Lond., M.D. Brux., and M.D. Durham. Fifteen years' standing (candidates have been sent up for the last twenty-five exams.). Clinical museum and microscopic demonstrations.—Address, M.D., 23, Wimpole-street, W.

London Matriculation, Matric.

Revision Classes, Dec. 18th, and Prelim. Scientific and Inter. Science Classes. Tuition during Vacation. Medical Preliminaries. Oxford and Cambridge 1st M.B. Practical Physics, Chemistry, and Biology Classes. Legal and Medical Preliminaries. Conjoint Examinations. Hospital and University Scholarships. Durham Examinations. Private Tuition. Science Laboratories. Large Staff. Prospectus and List of Lecturers on application to R. C. B. KERIN, B.A. (London), First in First-class Classical Honours, Editor of "Phaedo" and "Pro Plancio," CARLYON COLLEGE, 55 and 56, Chancery-lane, W.C.

SUCCESSES.—Science Scholarships, Guy's and Westminster, 3; Med. Prelim., 62; London Matric., 59; Inter. Arts, Sci., and Prelim. Sci., 53; 6 in Hons.; B.A. and B.Sc., 39; 1st M.B., 3; M.A., 2. Many Successes in other Examinations, Conjoint B.A., '99, 12.

D.P.H. Cantab.

An Oral Class (ten weeks) for the above Examination will begin Tuesday, January 23rd.

Fee, including practical work, 12 guineas. Special attention to the mathematics required and to bacteriology. Numerous successes.

Full particulars on application to Mr. E. S. Weymouth, M.A., Manager of

THE UNIVERSITY EXAMINATION POSTAL INSTITUTION,

27, SOUTHAMPTON STREET, STRAND, W.C.

REVERSIONS AND LIFE INTERESTS

In Landed or Funded Property or other Securities and Annuities PURCHASED or LOANS granted thereon by the EQUITABLE REVERSIONARY INTEREST SOCIETY (Limited), 10, Lancaster-place, Waterloo-bridge, Strand. Established 1835. Capital £500,000.

ESTABLISHED 1851.

BIRKBECK BANK,

Southampton Buildings, Chancery Lane, London.

INVESTED FUNDS, £10,000,000.

The BIRKBECK ALMANACK, with full particulars, post free.

FRANCIS RAVENSCROFT, *Manager*.

Trained Nurses for Sick Children

can be had on application to the Matron at the HOSPITAL for SICK CHILDREN, Great Ormond-street, W.C.

Telegraphic address: "Great London." Telephone No. 351, Holborn.

The Middlesex Hospital Trained

NURSES' INSTITUTE.—Thoroughly experienced NURSES can be immediately obtained for Medical and Surgical cases from the Sister in charge, 17, Cleveland-street, W. Telegraphic address: "Skilful, London."

Queen Charlotte's Lying-in Hospital

and MIDWIFERY TRAINING SCHOOL, Marylebone, N.W.—MEDICAL PUPILS admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing obstetrical complications and operative midwifery, upwards of three-fourths of the total admissions being primiparous cases.

CERTIFICATES AWARDED as required by the various Examining Bodies.

PUPILS RECEIVED and SPECIALLY TRAINED for MIDWIVES and MONTHLY NURSES. On completion of the period of Training, each pupil, on being found competent, is awarded a certificate of efficiency.

For rules, fees, &c., apply ARTHUR WATTS, Secretary.

THE NURSES' COOPERATION,

8, NEW CAVENDISH STREET, PORTLAND PLACE, W.

Founded 1891. Incorporated 1894.

Established to secure to nurses the full remuneration for their work.

FULLY TRAINED HOSPITAL { Medical, Surgical, Mental, Maternity, Fever, Children's, Massage } NURSES.

Supplied any time, day or night. Telegraphic address: "Aprons, London." Telephone. 2724 Gerrard. MISS AMY HUGHES, Supt.

ALL SAINTS NURSES CO-OPERATION

and NURSING HOME,

8 FITZROY STREET, W.

FULLY TRAINED HOSPITAL NURSES sent to Medical, Mental, Monthly, Surgical, Infectious cases at shortest notice, by Day or Night.

A limited number of PATIENTS received into the Home.

Apply, Lady Superintendent.

Telegrams: "Revigorate, London." Telephone: 1576 Gerrard.

THE LONDON ASSOCIATION OF NURSES.

CHIEF OFFICE—123, NEW BOND STREET, W.

(Between Brook Street and Grosvenor Street.)

BRANCH OFFICE—86, KENNINGTON PARK ROAD, S.E.

Superior Hospital-trained NURSES for Medical, Surgical, Monthly, Mental, Fever, and all Infectious Cases; also Male Nurses and Medical Rubbers can be obtained immediately on application to the Superintendent.

Great care is taken in the selection of Monthly Nurses, who reside in a separate home, and never come in contact with those who attend infectious cases.

M. FIRTH, Superintendent.

Telegraphic Address—"Firth's Association, London."

Telephone—1855 Gerrard.

GENERAL NURSING INSTITUTE.

5, Mandeville Place, Manchester Square, W

ESTABLISHED 1862 at Henrietta-street, Covent-garden.

Thoroughly experienced Hospital-trained NURSES supplied at a moment's notice, being resident in the Home.

Also, specially-trained NURSES for Mental and Nerve Cases.

Worked under the system of Co-operation.

Apply to the SUPERINTENDENT.

Telegrams: "Nutrix, London." Telephone Paddington 86.

MALE & FEMALE NURSES

HOSPITAL TRAINED

MUTUAL BENEFIT ASSOCIATION,
69, WIGMORE ST., CAVENDISH SQ., W.

TELEGRAPHIC ADDRESS—"DESIDERATUM, LONDON."
Male Nurses reside on the premises.

Male and Female Nurses, for Medical, Surgical, Mental, Dipsomania, Maternity, Fever, and Travelling Cases. Also SKILLED MASSEURS. THE GREATEST CARE IS TAKEN TO HAVE ONLY REFINED AND TEMPERATE NURSES ON THE STAFF. Obtainable Day or Night. Terms from 1½ guineas per week.—Apply W. E. LANGTON, or Lady Supt.

THE BAKER STREET ASSOCIATION OF TRAINED NURSES,
15, BAKER STREET, W. [REGD.

ON THE CO-OPERATION SYSTEM.

Experienced Nurses can be obtained for Medical, Surgical, Monthly, Mental, and Fever Cases, at the shortest notice. There is a Home in connexion, where patients can be received for treatment. Telephone No. 1010 Paddington. *Telegrams:* "WOMANLY, LONDON."

TEMPERANCE MALE NURSES' AND MASSEURS' CO-OPERATION,
15, GREAT MARYLEBONE STREET, PORTLAND PLACE, W.

Telegrams: "Tactear, London."
M. D. GOLD, Secretary.

Established to secure for Male Nurses the full remuneration for their work.
Superior Hospital and Asylum Trained NURSES, MASSEURS, and COURIERS, supplied day or night. Only first-class men, with experience in private nursing, supplied.
Terms 1½ to 3 guineas. Home and Club in connection.

(THE TEMPERANCE) MALE & FEMALE NURSES' CO-OPERATION,
45, BEAUMONT STREET, PORTLAND PLACE, W.

Telegrams: "ABSTAIN, LONDON."
Telephone: 606 PADDINGTON.

FULLY-TRAINED HOSPITAL MALE AND FEMALE NURSES AND MATERNITY.

Also **MENTAL** Male and Female NURSES. The Largest Staff in the Kingdom. Male Nurses reside on the premises. Skilled Masseurs and Masseuses supplied.
Terms from £2 2s. 0d. to £2 12s. 6d. per week. Apply, G. GORDON, or Lady Superintendent.

TRAINED MALE NURSES.
THE HAMILTON ASSOCIATION,
57, PARK STREET, GROSVENOR SQUARE, LONDON, W.

TELEGRAPHIC ADDRESS: "ALUMNUS, LONDON." [UNDER DISTINGUISHED MEDICAL PATRONAGE.

Supply HOSPITAL-TRAINED MALE NURSES for Medical, Surgical, Mental, and Dipsomania Cases (in Town or Country), at the shortest notice, day or night. Terms from TWO to FOUR GUINEAS a week. Certificated Masseurs sent out by the hour or week. Travelling Attendants for Invalids.

MALE NURSES' (TEMPERANCE) CO-OPERATION,
ONLY ADDRESS—10, THAYER STREET, MANCHESTER SQUARE, LONDON, W.

Superior Trained MALE NURSES for Medical, Surgical, Mental, Dipsomania, Fever, and Travelling Cases supplied at a moment's notice, Day or Night. Skilled MASSEURS Supplied. Terms, £1 11s. 6d. to £2 2s. and upwards. Nurses to receive their own fees.

Telephone: No. 538, Paddington. *Telegrams: "Assuaged, London."* F. ROUSE, Secretary.

CAUTION.—To prevent disappointment, great care should be taken in addressing letters, telegrams, &c., to our only address as above.

The Registered Nurses' Society
(THE FIRST CO-OPERATION OF CHARTERED NURSES),
269, REGENT STREET.

Teleph. No. 1712, Gerrard Exchange. Teleg. address—"Soror, London." A Co-operation of Private Nurses who have passed through THREE YEARS' HOSPITAL TRAINING, and have been registered after the most careful investigation of their credentials.

1, NEW QUEBEC ST., **THE** PORTMAN SQUARE, W.

MENTAL NURSES CO-OPERATION.
Obtainable Day or Night.

SPECIALLY TRAINED MENTAL NURSES.

TELEGRAMS— **MALE** AND **FEMALE.** "ODORANT, LONDON."

IMPORTANT.—All Male Nurses supplied are Total Abstainers and can be specially recommended in cases of Dipsomania.
Lady Sup., Miss M. STEWART. Secretary, C. BRYANT.

72

General Lying-in Hospital, York-road, Lambeth.

—Respectable WET NURSES and Certificated MONTHLY NURSES, also Certificated MIDWIVES, supplied on application. Female Pupils are trained in Midwifery and Monthly Nursing.—Address, A. Atkinson, Matron.

St. John's House.—Trained and

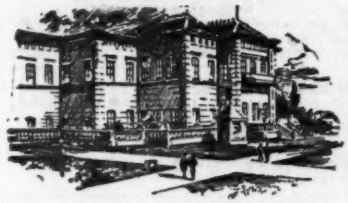
Experienced Medical, Surgical, Monthly NURSES and MASSEUSES can be obtained by application, personally or by letter, to the Sister Superior, 8, Norfolk-street, Strand. Telephone No. 2577. Telegraphic Address: "Private Nurses, London."

LEEDS TRAINED NURSES' INSTITUTION
FOR TRAINED NURSES, MEDICAL, SURGICAL, MONTHLY, AND MASSEUSES.

Apply to the Superintendent, 21, Hyde-terrace, Leeds.
Telegraphic Address—"Expert, Leeds." Telephone, 177.

Winter Health Resort
HELOUAN LES BAINS.

Medical Director and Physician:
ARTHUR J. M. BENTLEY, M.D.
(Formerly of Mena House).



TEWFIK PALACE HOTEL
15 miles from **CAIRO**

TEWFIK PALACE, Helouan (twenty-five minutes from Cairo, with an Hourly Train Service), was formerly the favourite residence of H.H. the late Khedive, Tewfik Pasha.

Its position in the heart of "**Desert-land**" is unique.

Suites of apartments, single and double rooms, with **bath rooms, electric lighting, and radiators** attached to each.

The arrangements throughout for **Heating, Ventilation,** and in fact everything connected with **Hygiene** and **Sanitation,** are as perfect as science can make them.

Taking into consideration its position—on the outskirts of the Town, and its proximity to the **Sulphur Baths,** its local and individual attractions, Tewfik Palace offers advantages not to be found elsewhere in the genial and sunny climate of **Egypt.**

The **Helouan Golf Links,** with its pretty Club House, adjoin the Hotel grounds. It is an 18-hole Course, and abounds with splendid natural hazards, several of a very sporting character.

Tewfik Palace is not only intended for those who require Medical supervision, but also for those who desire healthful pleasure and rest, and at the same time some recreation, and by such no **Health Resort in Egypt** is capable of being used with more benefit.

As a **Winter Resort** it has no equal—all the corridors are warmed with hot water pipes, and the rooms with **hot water radiators,** which maintain an equable temperature when the weather is chilly.

Tewfik Palace Hotel, having been selected for its unique position, and its hygienic and sanitary arrangements having been carefully planned under Medical direction, and carried out by one of the leading firms of Sanitary Engineers in Cairo (Messrs. Kirby & Co.), affords an excellent **Winter Resort** for those who seek rest, fresh air, and a suitable dietary, all of which go to help restore and re-establish health when broken down by worry and overwork, or when impaired by illness. In this way it is really a Sanatorium, though losing thereby none of the attractions and attributes of a **FIRST-CLASS ENGLISH RESIDENTIAL HOTEL and WINTER RESORT.**

MINERAL WATERS for

GOUT, RHEUMATISM, RHEUMATOID ARTHRITIS, NEURALGIA, LUMBAGO, UTERINE AND SKIN DISEASES.

GOLF, TENNIS, SHOOTING, RIDING & DRIVING, AND BOATING ON THE NILE.

SPECIAL ATTENTION IS GIVEN TO INVALIDS.

NURSING AND MASSAGE ARE UNDER THE DIRECTION OF THE LADY SUPERINTENDENT—MISS CHARLOTTE LEIGH.

Telephone. Telegraphic Address: "TEWFIK, CAIRO." A.B.C. Code, 4th Ed.

For particulars apply to the Medical Director or the Manager, Tewfik Palace, Cairo, or care of Messrs. A. DURANT & CO., 32, Gresham Street, E.C.

The BRITISH MEDICAL JOURNAL, June 3rd, 1899, says:—"**Helouan,** with its well-known baths ..... is probably at present the **best place in Egypt** for Invalids."

HEALTH IN EGYPT & HELOUAN, & its SULPHUR BATHS (Illustrated). By ARTHUR J. M. BENTLEY, M.D.
Send postage stamp to SIMPKIN, MARSHALL, HAMILTON, KENT & Co., LTD.

MONTREUX. HOTEL et VILLA BELMONT.
CELEBRATED AUTUMN, WINTER, & SPRING HEALTH RESORT.

A fine First-class English Family Hotel, modern comforts, latest sanitary and heating arrangements, in the **healthiest, most quiet, and charming** part; stands well up from the lake, surrounded by shady **terraces, Park,** splendid panoramic views. **Easy access from town. Charming Residence for change and rest. Lift. Bath rooms. Electric light. Dark room. Balconies. Tennis.** Omnibus (use of omnibus for churches and Kursaal).

CAIRO.

MENA HOUSE HOTEL,
AT THE PYRAMIDS.
WINTER HEALTH RESORT.

"By far the most comfortable Hotel in Egypt."—*World,* 1899.
ELECTRIC TRAM TO TOWN.
Resident Physician Dr. F. G. WAKELING, Claremont, Clacton-on-Sea.

ASSOUAN, EGYPT.
Winter Health Resort.
SAVOY HOTEL.

Facing South and in best position on Elephantine Island. Special Sanitation and Ventilation. Pure Water Service. Fire-places in Bedrooms, specially suitable for Invalids.

For full particulars apply to the
ANGLO-AMERICAN NILE STEAMER AND HOTEL CO.,
SHARIA BOULAC, CAIRO.

Resident Patients. — M.D. Cantab. can receive one in his detached house; good garden. South Coast. Seaside noted for sunshine. Trained nurse kept. Every convenience.—Address, care of Mr. C. H. Wells, Guy's Hospital, S.E.

LUXOR and ASSOUAN (Upper Egypt).

WINTER RESORT for HEALTH and PLEASURE.

LUXOR: "KARNAK" and "LUXOR" HOTELS.

ASSOUAN: "CATARACT" and "GRAND" HOTELS.

Electric Light. Barber's Saloon. Steam Laundry. Dairy, Vegetable Garden. English Lady Housekeeper. Doctor, Chaplain, and Trained Nurse. English Church.

CATARACT HOTEL, ASSOUAN, new this Season, beautifully situated and specially suitable for Invalids.

For tariffs, &c., apply to Mr. Pagnon of Luxor and Assouan, or at any of the offices of THOS. COOK & SON.

Resident Patients. — A List of Medical Men in all parts willing to receive into their houses Resident Patients, together with a full description of the accommodation offered, terms, &c., can be had without charge from Mr. G. B. Stocker, 8, Lancaster-place, Strand, W.C.

Stretton House, Church Stretton,

Salop.—A Private Institution for the Treatment of Mental Diseases (Upper Class only).
See Medical Directory, p. 1943, or Album.
Prospectus from Resident Medical Officer.
Telegrams: Campbell Hyslop, Church Stretton.

THE MOAT HOUSE,

TAMWORTH, STAFFORDSHIRE.

A HOME for NERVOUS and MENTAL CASES. Stations, L. & N. West. and Mid. Railways.

The House stands in grounds of ten acres (within 5 minutes' drive of either station), and is devoted to the care and treatment of a few Ladies suffering from Nervous and Mental Disorders, who enjoy the comfort, privacy, and occupations of home life. Voluntary patients are received without certificates.—For terms, &c., apply to the Resident Proprietor, E. HOLLINS, M.A. Camb., J.P.

The Women's Temperance Home at

Sydenham receives a limited number of LADIES desirous of overcoming habits of Intemperance. Terms moderate, varying according to requirements.—For particulars, apply The Matron, The Tor, Silverdale, Sydenham.

Barnwood House Hospital for

MENTAL DISEASES, Barnwood, near Gloucester. Exclusively for Private Patients of the Upper and Middle Classes. This Institution is devoted to the Care and Treatment of persons of both sexes at moderate rates of payment. The terms vary according to the requirements of the patients, who can have private rooms and special attendants, or be accommodated in Detached Villas and in the Branch Convalescent Establishment on the hills. Under special circumstances the rates of payment may be greatly reduced by the Committee.—For further information apply to J. G. Soutar, M.B., the Med. Supt.

St. Luke's Hospital, London, E.C.

Established 1751.

This Hospital was established for the Treatment of Mental Diseases of the Middle Classes. Preference is given to acute cases, and these are admitted either gratuitously or on payment of a weekly sum varying from 14s. to 30s., according to the circumstances of each. Patients are eligible for admission from any part of the United Kingdom.

The Convalescent Establishment in connexion with the Hospital is at St. Lawrence, Ramsgate.

Forms of application may be had from, and inquiries addressed to, the Secretary, at the Hospital, Old-street, London, E.C.

Aug. 31st, 1898. W. H. BAIRD, Secretary.

SPRINGFIELD HOUSE PRIVATE ASYLUM, BEDFORD.

For forms of admission, &c., address DAVID BOWER, M.D., as above. (Dr. B. attends at 5, Duchess-street, Portland-place, W., on Tuesdays, from 3 to 4.) **Terms 2½ guineas per week.**

There is a Vacancy for One Lady and One Gentleman.

THE HUGUENOTS,

EAST HILL, WANDSWORTH.

A HOME FOR THE TREATMENT OF LADIES OF UNSOUND MIND.

TWELVE LADIES are received either under certificates or as Voluntary Boarders. The house has large grounds and is healthily situated near several commons. A mental Specialist visits.

Apply, MISS F. LEECH.

Exeter Asylum.—Private Patients

are admitted into this Asylum at a uniform rate of 25s. a week. This sum includes everything except clothing. For further information, printed forms of certificates, &c., apply, R. L. Rutherford, M.D., Medical Superintendent.

"The wards are in excellent order, bright and cheerful, and those occupied by the patients of the private class should attract many whose means are limited from all parts of England."—Extract from the Forty-eighth Report of the Commissioners in Lunacy.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES.

President: The Right Hon. the Earl MANVERS.

This Institution is exclusively for the reception of a limited number of PRIVATE PATIENTS of both sexes, of the UPPER and MIDDLE CLASSES, at moderate rates of payment. It is beautifully situated in its own grounds, on an eminence a short distance from Nottingham, and commands an extensive view of the surrounding country; and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted.

For terms, &c., apply to Dr. TATE, Medical Superintendent.

Private Home for the Treatment of

INSANE LADIES,
ASHBROOK HALL, HOLLINGTON,

within half an hour's walk of St. Leonards-on-Sea, conducted by the Widow of the late Samuel Hitch, M.D., formerly of Sandywell-park, near Cheltenham, for many years Physician to the General Lunatic Asylum for the County of Gloucester.

Station: Warrior-square, St. Leonards. Telegraph Office: Hollington.

For particulars and terms apply to
Mrs. LETITIA A. HITCH or Miss ADAMS, Co-Licensee.

NERVOUS & MENTAL AFFECTIONS.

The Grove, Catton, near Norwich.—

A quiet **HOME** for the **Special Treatment** of a limited number of **Ladies** suffering from **Nervous** and **Mental Affections.** The house stands in beautiful grounds of about ten acres in extent, is situated a mile and a half from the **City** of **Norwich,** and contains the most modern requirements and comforts.

Carriage drives and **amusements** of all kinds are provided for patients. **Boarders** are also received **without certificates.**

For further particulars apply to the Resident Physician, CECIL A. P. OSBURNE (formerly Medical Attendant, Grove House Asylum and The Oaks Sanatorium, Hythe); or to the Misses McLintock.

INEBRIETY.

MELBOURNE HOUSE LEICESTER.

PRIVATE HOME FOR LADIES.

Medical Attendant: J. HEADLEY NEALE, M.B., M.R.C.P. Lond.
Principal: H. M. RILEY, Assoc. Soc. Study of Inebriety.
Thirty Years' Experience. Excellent Medical References.
For Terms and particulars apply Miss RILEY, or PRINCIPAL.

Grove House, All Stretton, Church

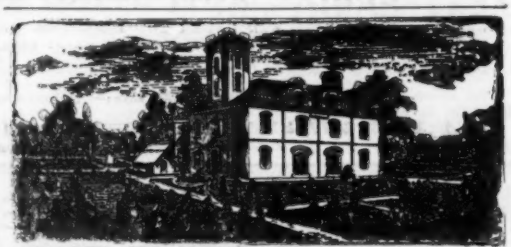
STRETTON, SHROPSHIRE.

A PRIVATE HOME for the Care and Treatment of a limited number of Ladies mentally afflicted. Climate healthy and bracing.

Apply to Mrs. McLintock (widow of the late Dr. McLintock), the Resident Proprietress, or to the Medical Superintendent.

Wye House Asylum, Buxton, Derby-

shire, for the middle and upper classes of BOTH SEXES, is beautifully situated in the healthy and bracing climate of the Derbyshire hills, and is directly accessible by the Midland and the London and North-Western Railways.—For terms and other particulars, address the Resident Physician and Proprietor, Dr. F. K. DICKSON.



INEBRIETY, THE MORPHIA HABIT, AND THE ABUSE OF DRUGS.

A PRIVATE HOME, ESTABLISHED 1884.

for the Treatment and Cure of Ladies of the Upper and Higher Middle Classes suffering from the above. Highly successful results. Medical Attendant: Dr. J. St. T. CLARKE, Leicester.—For terms, &c., apply, Mrs. THEOBALD, Tower House, Leicester.

Telegraphic Address: "Theobald, Leicester."

St. Andrew's Hospital for Mental

DISEASES.
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY.

President—The Right Honble. the EARL SPENCER, K.G.

The Institution is pleasantly situated in a healthy locality, one mile from the London and North-Western or Midland lines, and one and a half hour only from London.

It is surrounded by more than 100 acres of pleasure grounds.

Great care is exercised in the classification of the Patients according to their habits and different degrees of mental aberration, so that those who are quiet or convalescent may not associate with those whose minds are more affected.

Ample means of occupation and amusement are provided, including Cricket, Croquet, Lawn Tennis, and Archery. There are also Billiard Rooms, and a large Recreation Hall and Theatre.

The terms vary from 25s. to £4 4s. a week, according to the requirements of the case.

Patients paying higher rates can have Special Attendants, Horses, and Carriages; and Private Rooms in the Hospital; or in detached villas in the grounds of the hospital; or at Moulton Park, a branch establishment, two miles from the hospital.

There is also a Seaside House, to which patients may be sent.

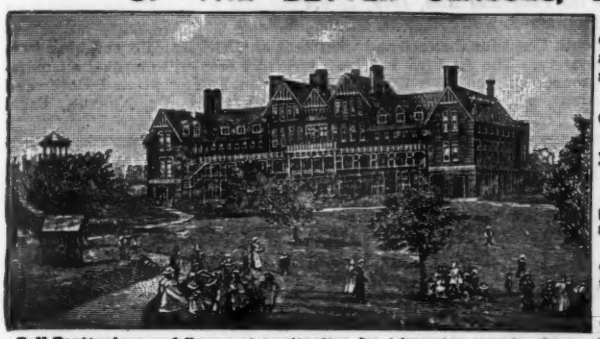
For further information apply to the Medical Superintendent.

Warneford Asylum, Oxford.—This

Asylum, for the care and treatment of the Insane of both sexes of the Middle and Upper Classes, is pleasantly situated on Headlington-hill, near Oxford, and has been recently enlarged. The grounds are extensive, and cricket, tennis, billiards, dances, and other amusements are amply provided. There are now vacancies for patients at moderate charges. Voluntary patients can also be received.—For particulars apply to the Medical Superintendent, Dr. NEIL.

THE YARROW HOME FOR CONVALESCENT CHILDREN

OF THE BETTER CLASSES, BROADSTAIRS.



Established and endowed for 100 well-mannered children of respectable and educated persons who are unable to afford the entire cost of a change of air at the seaside for their convalescent children.

Children of the lower class poor are NOT eligible.

Boys from 4 to 14 years and Girls from 4 to 16 years are admitted irrespective of nationality or creed.

A charge of 5s. per week is made for each child.

The Building stands in 10½ acres of ornamental grounds, with large sheltered garden and shrubberies, and faces the sea.

The Home is under the management of a highly experienced Matron. A Medical Officer and Certificated Nurses form a part of the Staff.

The Spacious Play Rooms are fully equipped for recreation.

Full Particulars and Forms of Application for Admission may be obtained on application to Mr. T. F. MYERS, Secretary, at the LONDON OFFICES 73A, QUEEN VICTORIA STREET, E.C.

WEST MALLING PLACE. KENT SANATORIUM.

FOR NERVOUS AND MENTAL DISORDERS.

Beautifully situated in a retired position in the midst of the finest scenery in the garden of England. An easy distance from town by three lines of railway between Sevenoaks, Maidstone, and Tonbridge. Terms strictly moderate. Private rooms and separate cottage may be had. Trained Nurses and Attendants, and **OPEN AIR TREATMENT.** Address, Dr. ADAM, Resident Physician. Telegrams: Adam, West Malling.

TREATMENT OF INEBRIETY.

KINGSWOOD PARK, near BRISTOL.

"LICENSED UNDER THE INEBRIATES ACTS."

Resident Medical Superintendent—W. D. HENDERSON, M.R.C.S., L.R.C.P.Lond.

A Home for the reception of Gentlemen suffering from the abuse of Alcohol, Opium, or other Drugs, under the Acts or privately. The house is situated nearly 400 ft. above sea level, between Clifton and Bath.

For particulars apply to MEDICAL SUPERINTENDENT, *or* **T. WALTER BRIMACOMBE (Licensee).**

NORTHWOODS HOUSE

WINTERBOURNE, near Bristol.

PRIVATE ASYLUM for LADIES and GENTLEMEN.

Situated in a large park in a healthy and picturesque locality, easily accessible by rail viâ Bristol, Patchway, or Yate Stations. Uncertified Voluntary Boarders can now be received.—For further information see Medical Directory, page 2089; and for terms, &c., apply to Dr. EAGER, Resident Physician.

HAYDOCK LODGE, NEWTON-LE-WILLOWS, LANCASHIRE,

Is charmingly situated in a healthy and retired neighbourhood, midway between Liverpool and Manchester, about two miles from Newton-le-Willows Station on the London and North-Western Railway. It is a comfortably furnished country mansion, especially adapted for the care and treatment of persons of unsound mind. Besides the use of the general sitting-rooms, &c., patients of both sexes can have private apartments and special attendants at moderate rates of payment.

Information as to terms, &c., may be obtained on application to the Resident Medical Superintendent — CHARLES T. STREET, L.R.C.P. Lond., M.R.C.S. Eng., who attends at 51A, Rodney-st., Liverpool, every Thursday, from 2 to 4.

Telegrams: Street, Ashton-in-Makerfield. Telephone (National), No. 3, Ashton-in-Makerfield.

Visiting Physician: ALEXANDER DAVIDSON, M.D., F.R.C.P., Physician to the Liverpool Royal Infirmary.

INTEMPERANCE.

CAPEL LODGE, NEAR FOLKESTONE.

Licensed Under the Inebriates Acts, 1879, 1898.

Resident Proprietor and Licensee—E. NORTON, M.D., L.R.C.P., M.R.C.S.

The only Private RETREAT and HOME on the South Coast for the care and treatment of GENTLEMEN suffering from Inebriety or the abuse of drugs; under the Acts or privately. The HOUSE has been specially erected to meet the requirements of the Acts. It stands in its own extensive grounds on the high chalk cliffs between Folkestone and Dover and overlooks the sea. Billiard Room, Library, occupations, and amusements. For prospectus apply, Dr. NORTON, Capel Lodge, near Folkestone.

INEBRIETY.

TOWER HOUSE RETREAT & SANATORIUM

(Ltd.), Westgate-on-Sea, Kent.

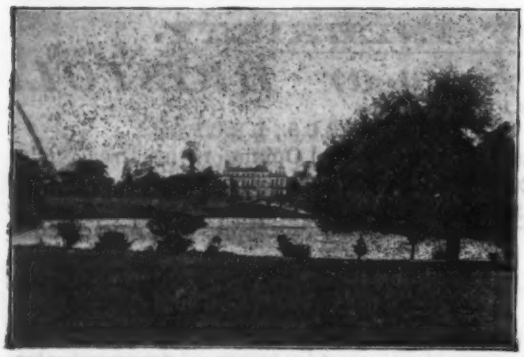
Principal and Resident Physician—JAMES CHEESE, L.R.C.P., M.R.C.S.

Licensed under the Inebriates' Acts, 1879-88. The only establishment in the United Kingdom specially erected for the reception and treatment of Ladies and Gentlemen desirous of overcoming habits of Intemperance or of the Abuse of Narcotic Drugs.

The house stands in its own grounds of nearly three acres, and is replete with every convenience, containing a large Billiard-room, spacious Drawing-rooms, Smoking-rooms, Bath-rooms, &c.

Patients can be received under the Act or privately.

For prospectus, forms (when required) for signature under the Act, and further particulars, address Secretary, Tower House, Westgate-on-Sea. Telephone No. 26.



INEBRIETY.

ASTON HALL, near Sutton Coldfield,

WARWICKSHIRE.

Resident Medical Superintendent: HUGH J. D. MACKAY L.R.C.P.E., L.R.C.S.E., L.F.P. & S., L.M.

Established 25 years. *Licensed under the Inebriates Act*

140 acres of Private Grounds, including Lakes o twelve acres.

Fishing, Shooting, nine-hole Golf Course, Billiards, Cricket, &c., &c. Terms from 3 guineas per week.

For particulars apply to THE SECRETARY.

Telegraphic Address—"REST, ALDRIDGE."

Resident Patient.—A Medical Man,

married, residing in a well-arranged house with garden, near London, S.W., and receiving only one patient, Mental or otherwise afflicted, has now a vacancy. References to former patients or to their friends. Own nurse or servant could be accommodated upon same floor. Terms moderate according to requirements.—Address, No. 445, THE LANCET Office, 423, Strand, W.C.

A Medical Man of lengthened and

very successful experience in the treatment of Mental Disease and Hysteria has a vacancy for a RESIDENT PATIENT. The house is beautifully situated in the Midland counties, and within a convenient distance of London. The domestic arrangements are liberal and refined. References to relatives of former patients.—Address, M. B. G., THE LANCET Office, 423, Strand, W.C.

Brighton.—Establishment for those

requiring Medical, Surgical, Nursing care, or Change and Rest after Illness. Medical Baths, Massage, Electricity. Resident and Visiting Doctors. Patient's own doctors can attend if desired; also friends can remain if wished. House is large, close to sea, overlooking ornamental gardens. Every attention to comfort, nursing, and diet. Terms from 22 2s.—Apply, the Medical Superintendent, Stilwood Lodge, Brighton.

FLOWER HOUSE,

CATFORD, S.E.

A Sanatorium of the highest class for the Treatment and Care of Gentlemen of Unsound Mind.

N.B.—Under the New Act voluntary boarders can be received on their own personal application.

Apply to Dr. MERCIER, Resident Medical Superintendent.

Resident Patients.—Any Invalid

requiring a HOME, with or without treatment, in the house of a Medical Man in any part of the Kingdom is requested to apply for a List giving full particulars of such houses to Hon. Sec., Association of Medical Men receiving Resident Patients, Bodorgan Manor, Bournemouth.

Medical Man, married, has vacancy

for a RESIDENT PATIENT. Long and successful experience in mental cases. Large private walled-in garden adjoining the house, which is detached. Inclusive terms vary from 3½ to 6 guineas a week according to the requirements of the case. Highest references.—Charles Etheridge, M.R.C.S., &c., Whitstable, Kent.

WYKE HOUSE,

ISLEWORTH, MIDDLESEX.

A Private Asylum for Ladies and Gentlemen mentally afflicted. Voluntary Boarders are received. The grounds are very extensive and various amusements are provided. For terms apply to

F. MURCHISON, M.A., M.B., Resident Proprietor.

THE INEBRIATES' ACTS, 1879-98.

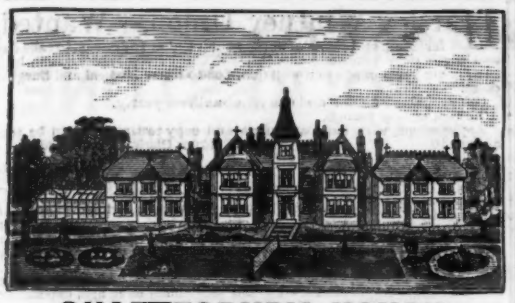
BUNTINGFORD HOUSE RETREAT, HERTFORDSHIRE, for the Treatment and Care of Gentlemen suffering from Inebriety and the Abuse of Drugs. Nine acres of land. Healthy employment and recreations. Workshops, Poultry Farm, Cricket Ground, Tennis, Billiards, &c.

Terms from £1 5s. to £2 5s. a week.

No extras.

For prospectus and vacancies apply

NORMAN DAVIS, M.D., Medical Superintendent.



SHAFTESBURY HOUSE,

FORMBY-BY-THE-SEA, near LIVERPOOL.

PRIVATE HOUSE LICENSED FOR THE TREATMENT OF LADIES & GENTLEMEN MENTALLY AFFLICTED.

The Resident Licensee has had over twenty years' experience in the treatment of Mental Disease.

PLANS APPROVED BY COMMISSIONERS IN LUNACY.—This House, erected from Plans approved by the Commissioners in Lunacy, is in every possible way in accordance with the modern ideas of the treatment of Mental Disease.

The Rooms throughout the Building are large, airy, cheerful, light, very brightly furnished, and, as the walls are tinted in various colours, there is a complete absence of anything approaching to dulness or gloom.

WARMING, VENTILATION, AND DRAINAGE.—Each Sitting-room, Dormitory, and Corridor is warmed and ventilated by special means beside the ordinary fireplace, and the Drainage is perfect.

SEA AIR.—The House being situated about a mile from the sea, Patients have the benefit of sea air.

PRIVATE ROOMS.—Private rooms and special attendants provided whenever required.

VOLUNTARY BOARDERS.—Voluntary Boarders received without certificates.

BORDERLAND CASES can be treated in Private Cottages outside.

GROUNDS AND AMUSEMENTS.—The House is surrounded by several acres of ornamentally laid out Pleasure Grounds, which afford ample privacy and room for exercise, Lawn Tennis, and other Amusements.

A THEATRE, with Dressing-rooms approached from the House through a magnificent Conservatory, affords every facility for performing Stage Plays, for Dances, and other Amusements.

MEDICAL OPINION.—All Medical Men who have visited the House have expressed themselves as highly pleased with the arrangements.

TRAIN SERVICE.—Formby Station is about ten minutes' walk distant. Trains run to and from Formby every half-hour to Southport, as also to the Exchange Station, Liverpool, and there is now direct communication with the North and with London and the South of England by means of the London and North-Western Railway.

Visiting Physician—T. R. GLYNN, M.D.Lond., F.R.C.P., Senior Physician, Liverpool Royal Infirmary.

Chaplain—Rev. J. B. RICHARDSON, M.A., Green Lea, Formby.

TERMS, ETC.—Terms, which are moderate, and all information can be obtained from—

STANLEY A. GILL, B.A., M.D., M.R.C.P. Lond., *Resident Licensee.*

TELEPHONE No. 8808.

WONFORD HOUSE.

HOSPITAL FOR THE INSANE, near EXETER

A REGISTERED HOSPITAL FOR THE UPPER AND MIDDLE CLASSES.

This Institution is situated in a beautiful and healthy locality, within a short distance of the City of Exeter.

There is comfortable accommodation at moderate rates, both in the Hospital itself and at Plantation House, Dawlish, a seaside residence on the South Devon Coast, affording more privacy, with the benefits of sea air and a mild salubrious climate.

Private Rooms and Special Attendants provided, if required.

Voluntary Patients or Boarders also received without certificates.

For Terms, &c., apply to

P. MAURY DEAS, M.B., M.S. Lond.,
Resident Medical Superintendent.

London Fever Hospital, Liverpool-road, Islington, N.

DISEASES TREATED.—Scarlet Fever at all times, and Diphtheria, Measles, German Measles, and Typhoid whenever accommodation can be made available.

Private rooms (for scarlet fever only) at £3 3s. a week. Ward patients pay a fee of £3 3s. each, equal to about a fourth of their cost on an average, the balance falling upon the funds of the Hospital.

Governors' servants, and certain employés of subscribing firms, clubs, and hotels, are treated free of all charge.

The Hospital is not connected with the Metropolitan Asylums Board and receives no aid from the rates.

In applying for admission send medical certificate and the name of some one who will guarantee payment of fees.

Additional help is urgently needed.

Bankers: Prescott & Co., 50, Cornhill, E.C.

W. CHRISTIE (Major), Secretary.

INEBRIETY AND ABUSE OF DRUGS.

"Northlands Retreat," 10 and 12,

North-street, Old Wandsworth, S.W.—Ladies received under the "Inebriates' Act of 1879" or privately. No undue restrictions. Every care and kindness. Large garden. Near several commons. Medical supervision. Established thirty years. Moderate terms. On L. & S. W. R.—Mrs. Blackmore.

ACCOUCHEMENT.

Ladies received in the houses of a Medical Man—one house in London, the other in a quiet country village, within one hour of Town—whose wife is a skilled and practised Obstetrician.—For terms, &c., address M. O. S., care of Messrs. Gale & Co., 15, Bouverie-street, London, E.C.

Private Home for the Care, Instruction, and Training of Backward, Delicate, and Feeble-minded Children, under Medical management. Special department for elder Girls and Boys. Resident Teachers. Home comforts. Cycling, gardening, basket-making, &c., taught. Seventeen years' experience. Large secluded grounds.—Apply, Lady Superintendent or Medical Director, Woodside Court, East Croydon. N.B.—Tram car from station to Addiscombe.

INEBRIETY.

DALRYMPLE HOME, RICKMANSWORTH, HERTS.

For the treatment of Gentlemen under the Act and privately. Terms 2 to 5 guineas weekly. 4½ acres charming grounds on the bank of the river Colne. Cricket, Tennis, Billiards, Concert Room, Workshop, Photographic Studio, &c. Apply to the Medical Superintendent.

INEBRIETY.

UNDER THE 1879 ACT OR PRIVATELY.

J. M. HOBSON, M.D., B.Sc., can receive, under his personal care, a few Ladies, in a house attached to his own extensive grounds. Efficient isolation. Every facility for congenial work and recreation. Experienced lady in charge.—Address, Glendalough, Morland-road, Croydon.

ABERYSTWYTH,

"The Biarritz of Wales,"

is highly recommended for invalids. It possesses the most equable temperature, its shores being swept by the Gulf Stream and the S.W. breezes of the Atlantic. The drainage is perfect, and the town is supplied with the purest water from Plynlimmon.

The late Sir James Clarke, M.D., says: "A fortnight in Aberystwyth is equivalent to a month's residence in most watering-places."

C.E.T.S. HOMES FOR FEMALE INEBRIATES.

Patients are received at Ellison Lodge, Herne Hill, S.E., and at Temple Lodge, Torquay.

Three classes of patients received, payments varying from 7s. 6d. to £2 2s. For information apply Secretary, C.E.T.S. 4, The Sanctuary, Westminster, S.W.

CLIFTON GRAND SPA HYDRO., BRISTOL.

Near Suspension Bridge, Channel Steamers, and Downs.

Physician: C. J. WHITBY, M.D. Cantab.

Splendid Turkish, Russian, and Hydropathic Baths, Dowsing's Radiant Heat Baths. Massage, Electricity, Aix-Douche, Weir-Mitchell Treatment.—Address, MANAGER. Telegrams: "SPA, BRISTOL."

ASHWOOD HOUSE, KINGSWINFORD,

STAFFORDSHIRE.

An old-established and modernised Institution for the Medical Treatment of Ladies and Gentlemen mentally afflicted.

The House, pleasantly situated, stands in picturesque grounds of forty acres in extent, with a surrounding country noted for the beauty of its walks and drives. The climate is genial and bracing. Occupation, in-door and out-door amusements, and carriage and other exercise amply provided.

Terms range from 2½ to 6 guineas per week, inclusive, according to requirements as to accommodation, special attendance, &c.

Railway Stations: Stourbridge Junction (G.W.R.), 3½ miles; Dudley (L. & N.W.R.), 4 miles; Wolverhampton (G.W.R. or L. & N.W.R.), 7 miles. Intending visitors can be met at any of these stations.

For further particulars apply to the Medical Superintendent.

TREATMENT OF INEBRIETY AND ABUSE OF DRUGS.

HIGH SHOT HOUSE,

ST. MARGARET'S, TWICKENHAM.

For Gentlemen under the Acts and Privately.

For terms, &c., apply to A. E. NEALE, M.B., B.S.,
RESIDENT MEDICAL SUPERINTENDENT.

Clacton-on-Sea.—W. Overend, M.A., M.D. Oxon,

can receive one or two RESIDENT PATIENTS. Clacton has a southern aspect, a low rainfall, and plenty of sunshine. Fogs are uncommon and the air is always bracing. Attention to comfort and diet. Massage and Nauheim treatment if required.—Address, Dr. Overend, Glenroy, Clacton-on-Sea.

Patients desiring Medical Attendance

or Supervision can be received into the house of a Medical Man (married) residing at the seaside. Exceptional experience in the treatment of all forms of drug and alcoholic abuse.—Address, in first place, to No. 1111, THE LANCET Office, 423, Strand, W.C.

Consumption.—Open-air Treatment.

Can anyone recommend a thoroughly good Sanatorium for a Young Lady where the treatment would be carried out in its entirety, but where the cost would not exceed £100 per annum?—Address, No. 1106, THE LANCET Office, 423, Strand, W.C.

Prudential Assurance Company,

LIMITED, HOLBORN BARS, LONDON.
Founded 1848.
Invested funds, £35,000,000.

General Life Assurance Company.

Established 1837. LIFE, MORTGAGES, ANNUITIES.
CHIEF OFFICE—103, CANNON STREET, LONDON, E.C.
Capital and Reserves—£3,800,000.
SIR ANDREW LUSK, Bart., Chairman.
Advances made on Reversions, vested or contingent, and Life Interest, and on Personal Security in connexion with a Life Policy.
JOHN R. FREEMAN, Manager and Secretary.

National Provident Institution.

FOR MUTUAL LIFE ASSURANCE.

ACCUMULATED FUND	£5,400,000
PAID IN CLAIMS	Nearly £11,000,000

The Profits are Divided solely amongst the Assured; already divided, £5,400,000.

Endowment-Assurance Policies are issued, combining Life Assurance, at minimum cost, with provision for old age. The practical effect of these policies in the National Provident Institution is that the member's life is assured until he reaches the age agreed upon, and on his reaching that age the whole of the premiums paid are returned to him, and a considerable sum in addition, representing a by no means insignificant rate of interest on his payments.—No. 48, Gracechurch-street, London, E.C.

WINTER IN THE WEST INDIES.

Special Tours. 65 days for £65,
BY MAGNIFICENT VESSELS OF THE
ROYAL MAIL STEAM PACKET COMPANY.
For particulars, apply 18, Moorgate-street, or 29, Cockspur-street (West-end), London.

New Zealand, Australia, Cape

TOWN, TENERIFFE, by the NEW ZEALAND SHIPPING COMPANY'S Royal Mail Steamers. Next departure from London (Plymouth two days later).
Jan. 4th. WAIMATE. 5610 tons. | Feb. 1st. WAKANUI. 5706 tons.
Low fares, single and return. Superior accommodation.
Apply to Gray, Dawes & Co., Craven House, Northumberland-avenue, or to J. B. Westray & Co., 138, Leadenhall-street, E.C.

URIAGE LES BAINS,

ISERE (FRANCE).
Season from 25th May till 15th October.
Saline, Purgative, and Sulphurous Waters, Treatment of Diseases of the Skin, Lymphatism, Rheumatism, Syphilis, &c.
Baths, Douches, Pulverisations, Hydro-therapeutics, and Health Resort.
Apply to the Director of the Etablissement at Uriage.

SMEDLEY'S, MATLOCK.

HYDROPATHIC ESTABLISHMENT.
STATION—MATLOCK BRIDGE.

THE RADIANT HEAT BATH.

A new installation of these Baths has just been added. The local application of superheated dry air has produced undoubted benefit in Chronic Rheumatism, Gout, Rheumatoid Arthritis, Stiff and Painful Joints, Neuralgias, Lumbago, Sciatica, Sprains, &c.
The heat being produced by ELECTRICITY, there is no vitiation of the atmosphere by products of combustion, and the apparatus is under perfect control, being provided with a regulator by means of which the temperature can be graduated throughout a range of over 400° F.
These local baths are specially useful in cases where the patient is enfeebled or crippled, or from any cause unfit for the application of the ordinary Turkish or other form of hot-air bath.
The Baths are given under medical direction only.
Terms and Prospectus on application to the Manager.

Hartley Wintney Union.—Wanted,

for Male and Female wards of the Union Infirmary, to take day and night duty (alternate months) a NURSE, who must be at least twenty-six years of age and well qualified to nurse Medical and Surgical cases.
Salary £30 per annum and one set of uniform yearly.
No beer or beer money.
Applications, with full particulars and copy testimonials, to be sent at once to W. H. WRIGHT, Clerk to the Guardians.
Odiham, Hants, Dec. 23rd, 1899.

Housekeeper.—The Coppice, Nottingham.

—Wanted, at this Asylum for private patients, a thoroughly efficient Housekeeper. She must be single and between thirty and forty years of age, and will have charge of and be responsible for the housekeeping department, stores, laundry, and management of the female servants. Applicants with hospital nursing experience preferred. Salary £60, with apartments, board, attendance, and washing.—Applications, with full particulars as to age, experience, &c., to be sent to Dr. Tate, Medical Superintendent.

Medical Officer, duly qualified

(Public Health qualification a recommendation) wanted for the Parish of Gairloch, Ross-shire, to reside at Poolewe. Knowledge of Gaelic essential. Salary from the Parish Council £200 per annum, besides private practice.—Apply, stating age and qualifications, with testimonials, to James Mackintosh, Inspector of Poor, Poolewe, 9th December, 1899.

City of York.—Medical Officer of Health.

—The Corporation of York invite applications from duly qualified Gentlemen for the position of Medical Officer of Health of the City. In addition to the ordinary duties, the Medical Officer will be required to act as Analyst under the Sale of Food and Drugs Acts, and Analyst to the Sewerage Committee, and also to perform such other duties as the Council may assign to his office, except the duties of the Police Surgeon. He must be qualified to undertake the chemical and bacteriological examination of sewage. Inclusive salary £400 per annum.
The gentleman appointed will be required to devote the whole of his time to the duties of the office and not engage in private practice. The Council will provide an office, laboratory and apparatus, stationery, and all necessary clerical assistance. Canvassing will disqualify.
Applications, stating age, whether married or single, qualifications, and particulars of experience, with copies of three recent testimonials, to be sent to the undersigned not later than Thursday, the 4th day of January, 1900, endorsed "Medical Officer of Health."
Guildhall, York, 4th December, 1899. W. H. ANDREW, Town Clerk.

St. Thomas's Hospital Medical

SCHOOL.—Applications are invited for the post of DEMONSTRATOR of PHYSIOLOGY, and should be sent, with testimonials, to the Dean, not later than Tuesday, January 2nd.
H. P. HAWKINS, M.A., M.D.Oxon., Dean.
Albert Embankment, London, S.E.

Belgrave Hospital for Children.—

There is a vacancy for a DENTAL SURGEON at this Hospital. Applications from duly qualified Practitioners, with copies of three testimonials obtained for this purpose, to be sent in to the undersigned not later than Tuesday, 2nd January, 1900.
G. GREENWAY, Hon. Secretary.
Belgrave Hospital for Children,
77 and 79, Gloucester-street, S.W., 15th December, 1899.

The Hospital for Women, Soho-square,

London, W. Founded 1842. Incorporated by Royal Charter 1887. Patron—H.R.H. the Prince of Wales, K.G. President—The Duke of Westminster, K.G. A vacancy is hereby declared for an ASSISTANT SURGEON. Candidates must be Fellows of the Royal College of Surgeons of England engaged in consulting practice only. Each candidate will be required to transmit with his testimonials a certificate of his age.
All applications to be made to the Secretary on or before 3rd January, 1900.
DAVID CANNON, Secretary.

St. John's Hospital for Diseases of the SKIN,

49, Leicester-square, London, W.C.—Applications are invited for an HONORARY ASSISTANT MEDICAL OFFICER, who must be a Graduate of an University of the United Kingdom and either a Fellow of the College of Surgeons or a Member of the Royal College of Physicians of either London, Dublin, or Edinburgh, or must be prepared to become so within one year.
Applications, with copies of testimonials (which will not be returned) stating age, experience, &c., to be sent to me not later than Jan. 15th, 1900. J. DUNLOP COSTINE, Superintendent.

Birmingham and Midland Eye HOSPITAL.

—Wanted, an ASSISTANT HOUSE SURGEON at the above Hospital, receiving 25,427 patients. The Assistant House Surgeon must be a Graduate in Surgery of any British University or a Member or a Fellow or Licentiate by examination of the College of Surgeons of England, Ireland, or Scotland. Salary £50 per annum, with apartments and board. Testimonials and evidence of registration to be addressed to the Chairman of the Medical Board, on or before Monday, the 15th day of January next. Special evidence of pathological training is expected. Any further information may be obtained on application to the Secretary. By order.
CRANMER GELL, Secretary.
Secretary's Office, Church-street, Birmingham, Dec. 23rd, 1899.

The Middlesex Hospital, W. —

NOTICE. By the resignation of Sir DOUGLAS-POWELL, Bart., M.D., Physician to this Hospital, a Vacancy is hereby declared.

A candidate for the office of Physician to the Hospital must be either a Fellow or Member of the Royal College of Physicians of London.

By order of the Weekly Board.

F. CLARE MELHADO, Secretary-Superintendent.

The Middlesex Hospital, W.—

Notice is hereby given that a Vacancy has been created for an ASSISTANT ANÆSTHETIST to the Hospital. Candidates, who must be duly qualified Registered Medical Practitioners, are invited to send in their applications to the undersigned (from whom further particulars may be obtained) on or before Saturday, the 6th January, 1900, by 12 o'clock noon.

By order of the Weekly Board.

Dec. 22nd, 1899. F. CLARE MELHADO, Secretary-Superintendent.

The Middlesex Hospital, W.—Applications

are invited for the office of ASSISTANT to the Director of the Cancer Research Laboratories. Salary £100 per annum, with an honorarium of £50 after his second year of office if elected. The gentleman appointed would be required to devote his whole time to the work of the department, to assist in the general routine work of the Laboratories, and make the post-mortem examinations of all patients dying in the special Cancer Wards.

Candidates, who must be doubly qualified, registered medical men, are requested to send in their applications to the undersigned, together with testimonials, on or before the 10th January, 1900. The appointment is an annual one but the officer is eligible for re-election. Candidates are to attend on Friday, 12th January, 1900, at 5 P.M.

F. CLARE MELHADO, Secretary-Superintendent.

20th December, 1899.

Central London Ophthalmic Hospital,

Gray's Inn-road, W.C.—There is a vacancy for HOUSE SURGEON. Applications with testimonials from duly qualified candidates, must be sent to the Secretary, on or before 9th January next. Candidates must attend at the Hospital on Thursday, the 11th January, at 4 P.M. Salary at the rate of £50 per annum, with board and residence provided in the Hospital.

JOHN GRIGGS BRYANT, Secretary.

Aberystwyth Infirmary. — House

SURGEON required. Must be duly qualified and registered. Thorough knowledge of Welsh essential. Must also act as Secretary. Salary £150, with the usual residential allowances (stimulants excepted). To commence duties March 1st, 1900. Canvassing prohibited.

Applications, &c., to be sent not later than January 20th, 1900, to the Secretary, Infirmary, Aberystwyth.

National Hospital for the Paralysed

and EPILEPTIC (ALBANY MEMORIAL), Queen-square, Bloomsbury.—HOUSE PHYSICIAN.—A vacancy has been created by the resignation of Dr. J. S. Collier, Senior House Physician. The Board of Management invite applications from gentlemen possessed of a double qualification. The present Junior House Physician is a candidate for the senior post, and applicants should state whether they are prepared to accept either appointment.

The salary of the Senior House Physician is £100, and that of the Junior £50 per annum with board and apartments.

Applications, with copies of recent testimonials, should be sent to the undersigned on or before 3rd January next.

13th Dec., 1899. B. BURFORD RAWLINGS, Secretary and Director.

St. Marylebone General Dispensary,

77, Welbeck-street, Cavendish-square.—A vacancy having occurred in the office of RESIDENT MEDICAL OFFICER to this Charity, the Directors are prepared to receive applications for the vacant office. Candidates must be registered and hold a Medical and Surgical qualification. Salary 100 guineas per annum, with an annual increase of 10 guineas to maximum of 120 guineas, with furnished apartments, attendance, coal, and light.

Intending candidates are requested to put themselves into communication with the Secretary, and written applications and testimonials to be forwarded not later than Tuesday, 2nd January next, and candidates must attend at the Dispensary on Wednesday, 3rd January, at 5 o'clock P.M. precisely. FRANK STOKES, Secretary.

20th Dec., 1899.

Medical Officer of Health for County

of SUTHERLAND.—Applications are wanted for the office of Medical Officer of Health for the County of Sutherland.

Applicants must be registered Medical Practitioners and possess a diploma in Sanitary Science, Public Health, or State Medicine, under Section 21 of the Medical Act, 1886.

Salary £300 per annum, with £50 in lieu of travelling and other expenses, except forms and official stationery and postages.

The Medical Officer will act as Officer for the Local Authority under the Public Health (Scotland) Act, 1897, and Acts therein referred to, and shall be subject to such bye-laws regulating the duties of the Medical Officer of Health for the County as may from time to time be made by the County Council.

The Medical Officer shall devote his whole time to the duties of his office, and shall not hold any other appointment or engage in private practice.

The applicant selected will be required to enter upon his duties immediately after his appointment.

Applications, stating qualifications and age, accompanied by testimonials, must be lodged with the undersigned on or before 20th January 1900. ARCHD. ARGO, County Clerk.

County Clerk's Office, Golspie, 20th Dec., 1899.

City of London Hospital for Diseases

of the CHEST, Victoria-park, E. (nearest station Cambridge-heath, G.E.R.).—Applications, with testimonials, for the post of SECOND HOUSE PHYSICIAN are invited to be sent to the Secretary on or before Jan. 10th, 1900. The appointment will be for six months. Candidates must be qualified. Board and residence provided, and salary at the rate of £30 per annum.

The successful candidate will be required to enter upon his duties on or about the 1st February.

Information as to duties, &c., can be obtained by application to Secretary, by letter or personally.

HENRY T. DUDLEY RYDER, Secretary.

Radcliffe Infirmary, Oxford. —

Wanted, for February 1st, HOUSE PHYSICIAN.—Applications, with testimonials, should be sent at once to the Secretary of the Staff, Radcliffe Infirmary.

Bradford Children's Hospital.—

Wanted, a HOUSE SURGEON (Gentleman), doubly qualified. Salary £80, with board, residence, and washing.

Applications, with testimonials, by Jan. 13th to

Bradford, Dec. 27th, 1899. C. V. WOODCOCK, Secretary.

The Royal Infirmary, Sheffield.—

Wanted, a JUNIOR ASSISTANT HOUSE SURGEON, who must possess a legal medical and surgical qualification from some university, college, or licensing body in the United Kingdom. Salary £50 per annum, with board, lodging, and washing.

Applications and testimonials to be addressed to the "Medical Staff of the Royal Infirmary, Sheffield," to the care of the Secretary, on or before Wednesday, January 24th, 1900.

Board Room, Dec. 28th, 1899. GEORGE HENRY DAY, Secretary.

St. Mary's Children's Hospital,

Plaistow, E.—SENIOR RESIDENT MEDICAL OFFICER required. Candidates must be doubly qualified, and registered under the Medical Acts.

The appointment is for one year, at a salary of £80 per annum, with residence in the hospital, board and washing.

Applications, with copies of testimonials, should be sent to the Secretary on or before January 4th, 1900.

L. K. GIVEN WILSON, B.Sc., Secretary.

Three Counties Asylum, near

Hitchin, Herts.—Wanted, a SECOND ASSISTANT MEDICAL OFFICER. Salary commencing at £150 per annum, with board, apartments, washing, and attendance.

Candidates must be males under thirty-five years of age, unmarried, and registered in Medicine and Surgery.

Applications, stating age and qualifications, with six copies of applicant's testimonials, to be forwarded on or before the 10th January, 1900 to

F. G. BUTLER,

Clerk to the Visiting Committee, St. Neot's, Hunts.

Leicester Infirmary.—There is a

vacancy in this institution for a HOUSE PHYSICIAN. Salary £100 per annum, with board, apartments and washing. Term of office twelve months, subject to re-election for an additional term of twelve months. Candidates are requested to send original testimonials, addressed to the Secretary, at his offices, 24, Friar-lane, Leicester, on or before Monday, January 1st, and at the same time to state their age.

Every candidate must be duly registered under the Medical Act.

The successful candidate will be required to enter upon his duties immediately after the election.

By order.

The Infirmary, Leicester, Dec. 19th, 1899. T. A. WYKES, Secretary.

District Infirmary, Ashton-under-

Lyne.—Wanted, by the end of January, a HOUSE SURGEON with registered Medical and Surgical diplomas. One hundred beds. Salary £100 a year and board and lodging. He should be able to give lessons to probationers.

Applications, enclosing testimonials and stating age, to be sent to the undersigned, the Hon. Secretary, on or before 9th January, 1900, marked outside "Application for the Office of House Surgeon." Personal canvassing is prohibited. WILLIAM BOTTOMLEY.

120, Stamford-street, Ashton-under-Lyne.

Medical Superintendent wanted.—

The Guardians of the Poor of the Parish of St. Mary, Islington, require a legally qualified MEDICAL MAN as Medical Superintendent for the New Infirmary at Highgate-hill. Salary £500 per annum, together with unfurnished residence, coals, gas, and washing, subject to deductions under the Poor-law Officers Superannuation Acts. Every candidate must be not less than thirty-five years of age, have been ten years in practice as a medical man, and have a degree from one of the universities. The duties of the officer will be open to reconsideration when the New Infirmary is opened, and the appointment will be subject in all respects to the provisions of any regulations which may hereafter be issued for the government of that establishment.

Further information will be found in the forms of application to be obtained at the under-mentioned offices, and written application on such forms must be sent to me on or before the 8th of January, 1900, accompanied by copies of not more than three testimonials as to competency and evidence of qualification. Selected candidates will have notice when to attend.

Personal canvassing of the guardians will be held a disqualification.

By order.

EDWIN DAVEY, Clerk.

Guardians' Offices, St. John's-road, Upper Holloway,
23rd December, 1899.

London Hospital, Whitechapel-road, E.—ASSISTANT PHYSICIAN.—There is a vacancy in the position of Assistant Physician at the London Hospital.

Applications and testimonials must be delivered at the House Governor's Office not later than 10 A.M. on Friday, 26th January, 1900.

Extract from Section XIII., Paragraph I., of the Bye-laws: "No person shall be eligible for the office of Assistant Physician to the Hospital unless he shall be a Member of the Royal College of Physicians, London."

G. Q. ROBERTS, House Governor and Secretary.

Elliott, Son & Boyton, 6, Vere-street, Cavendish-sq., are the best local AGENTS for Houses and Consulting Rooms in Harley, Wimpole, Welbeck, Queen Anne, and other leading streets off Cavendish and Portman-squares. Lists on application. Their old-established connexion affords them special knowledge and much exclusive information concerning properties in the neighbourhood.

Bedford & Co., Auctioneers and Surveyors, 10, Wigmore-street, Cavendish-square, W. (established 1860), have on their Books most of the principal Houses and Consulting-rooms to Let and for Sale in the Cavendish-square, Grosvenor-square, Portman-square, and leading Medical Districts. Properties registered free of charge.

Wimpole-street.—Flats for Pro-fessional and Residential purposes combined to be Let in a new handsome corner building, 57A, Wimpole-street. Self-contained flats on each floor, suitable for professional purposes, combined with residence. Passenger lift, electric light, good fittings, and all modern improvements.—Agents, Elliott, Son, and Boyton, 6, Vere-street, W.

CLINTON'S MEDICAL AGENCY,

10, ADAM STREET, STRAND, LONDON, W.C.

Telegraphic Address—"ELECTICISM, LONDON."

Mr. ARTHUR CLINTON, who has a large and influential connexion in the Profession, and can give the highest references, negotiates the Sale of PRACTICES and PARTNERSHIPS.

Also investigates and values same for Purchasers.

Books Examined, Posted, and Audited by a Chartered Medical Accountant of thirty years' experience.

Reliable Locum Tenens and Assistants supplied on short notice.

All communications received in strict confidence.

MEDICAL TRANSFER AGENCY AND ACCOUNTANCY OFFICES. (Established 1868.)

19, CRAVEN-STREET, STRAND, W.C.

Messrs. Peacock & Hadley nego-TIATE the TRANSFER of PRACTICES and PARTNERSHIPS, also undertake ARBITRATIONS, INVESTIGATION and VALUATION of Practices and all other business connected with MEDICAL AGENCY and ACCOUNTANCY.

LOCUM TENENS and ASSISTANTS with satisfactory testimonials can be engaged at very short notice.

BOOKS kept, ACCOUNTS made out, and DEBTS promptly collected in Town and Country.

No charge made to Purchasers or for inquiries.

Telegraphic address: "Herbaria, London."

London, E.—An old-established PRACTICE, situated in a main thoroughfare, held by present incumbent eleven years. The receipts, chiefly derived from ready money fees, average over £700 a year. The Practice is easily and inexpensively worked, no horse or assistant being kept. Net rent (stabling let off) £50. Convenient residence for bachelor or small family. Good references given by vendor and the books open to investigation. Premium about one year's purchase with efficient introduction.

North of England.—An Old-estab-lished PRACTICE in a large Manufacturing Town, held by Vendor several years. Patients consist of middle- and working-classes. Average receipts exceed £1600 a year; no clubs. Large modern residence, well situated, and fitted up with every convenience; good stabling and coach-house. Premium £2400.

West of England.—An unopposed PRACTICE, situate in a picturesque part of England. Receipts for the last three years average £400 a year, including £90 from transferable appointments. Small house, with stabling; rent £18. Good society and plenty of sport in the neighbouring district. Premium £350. Efficient introduction.

London, N.W.—Partnership.—An old-established, non-residential Cash and Private PRACTICE in good middle-class district. Principal who lives at a distance attends four or five hours a day only; receipts which are now £600 a year could be considerably increased with longer attendance and if Junior Partner lived in the neighbourhood. Expenses are light. Premium for half share £450. Suit a young and active gentleman.

London, N.E.—A thoroughly estab-lished CASH PRACTICE, doing £350 a year, capable of increase. Patients consist of middle- and working-classes. Fees at the surgery are chiefly 1s., Visits 1s. 6d. to 2s. 6d., Midwifery 15s. and 21s. Medium-sized house, rent £38. Premium £300. Books for last four years can be seen.

Apply to PEACOCK & HADLEY, 19, Craven-street, Strand, W.C.

80

MEDICAL PARTNERSHIP AND CONVEYANCING AGENCY,

1, ADAM-STREET, ADELPHI, W.C.

The SALE of PRACTICES and PARTNERSHIPS NEGOTIATED.

Trustworthy LOCUM TENENS and ASSISTANTS can be had at a few hours' notice.

N.B.—No charge made to Purchasers.

Notice.—Mr. J. C. Needes, with an experience of over a quarter of a century, is in an exceptional position to give intending purchasers independent information concerning most PRACTICES and PARTNERSHIPS. Those investments in the following List marked with an asterisk are well known to him, having been purchased through his Office by the present Incumbents years ago, and in many other cases an introduction can be given to gentlemen who have taken charge of the Practices during the absence of the Incumbents.

PARTNERSHIP.—NORTH MIDLANDS.—In consequence of the retirement of one of the Partners, the Half-share of an increasing Practice, yielding £1400 to £1500 per annum, is for negotiation. Situated in a Town about 20,000 inhabitants. Patients clergy, farmers, tradespeople, &c. Fees, mainly 3s. Visit and Medicine. About 150 cases of Midwifery yearly. The retiring Partner's excellent family residence (with large walled-in garden) is available for the purchaser. Premium for Share two years' purchase.

£1500 A YEAR.—LONDON.—A mixed Private and Cash PRACTICE yielding the above amount, and capable of increase, as a great deal of work is refused at present. Situated in a Northern Suburb. Convenient Private Residence, with stabling and large garden attached. Rent £45 per annum, Premium, £1000 down, and balance by instalments.

DEATH VACANCY.—SOUTH COAST.—In a large favourite watering place a Non-dispensing PRACTICE yielding £600 a year is for immediate Disposal. Held nearly twenty years by late incumbent who died suddenly. Good house on lease. Rent only £65 per annum. Situated at the best end of the town. Books have been well kept.

WESTERN COUNTY.—An old-established and easily-worked PRACTICE in a pretty Country Town. First-class hunting, trout fishing, and shooting. The Practice is worth at present £350 per annum, but the income was formerly nearly three times this amount and there is every reason to believe it could be greatly increased. Union, Vaccination, &c., yield £100. Visits 2s. 6d. to 10s. 6d. exclusive of medicine. Very little Midwifery. Well-situated family residence with garden, stabling, &c., attached.

CHEAP INVESTMENT.—£12 per week Cash.—A well-established Cash PRACTICE in London, S.E. The total cash receipts last year were £615 and they will amount to about £700 for the present year. Premium only £500. House rent £30. Drug bill £50, and as these are the only expenses money can be saved out of the Practice. In present hands a considerable time.

PARTNERSHIP, with Succession in two years, to an old-established Practice in a pleasant country town about 100 miles from London. The receipts amount to £900 per annum, including union and club appointments. Patients, clergy, professional men, farmers, tradespeople, &c. Railway station 2 miles distant. Vendor's excellent family residence with garden, tennis-court, stabling, and meadow attached can be had on the termination of the partnership. Golf, hunting, shooting, &c. Further particulars on application.

LONDON, S.W.—A lucrative PRACTICE yielding over £1100 per annum, nearly all of which is received in ready money fees. Almost half the income is derived from work at 2s. 6d. a visit and upwards, and there are several patients who pay £5 5s. for midwifery. The expenses of conducting the Practice are light, as a horse is not kept and the rent is only £50 per annum. Premium one year's purchase.

IN a PICTURESQUE and WELL-POPULATED DISTRICT, within 100 miles of London, an old-established PRACTICE, averaging about £500 per annum, including transferable union and club appointments. Held by vendor a number of years. Railway station in the place, and one other medical man. Visiting fees 3s. 6d. to 7s. 6d. One horse sufficient. Only about thirty cases of Midwifery yearly. The residence contains three sitting-rooms, four bedrooms, &c., with large garden, stabling, and paddock attached. Rent very moderate. Premium 1½ years' purchase. Hunting, fishing, shooting, and golf.

LONDON.—A PARTNERSHIP INTRODUCTION of six months (or possibly longer) will be given to a very old-established middle-class private PRACTICE averaging nearly £1400 per annum. About 40 cases of Midwifery yearly. The work is not hard, and neither a horse or qualified assistant is kept. A Dispenser at 30s. per week is sufficient assistance. House in main thoroughfare. Rent £55, premium £1500. The Practice has been held by present incumbent many years.

Apply to J. C. NEEDES, 1, Adam-street, Adelphi, W.C.

Locum Tenens and Temporary ASSISTANTS.—Practitioners requiring the above can immediately obtain thoroughly reliable qualified Gentlemen upon application to 1, Adam-street, Adelphi, W.C. Every Gentleman engaged by the Office in either of the above capacities is personally known to Mr. J. C. Needes. An office fee of half a guinea is payable by the Principal.

Telegraphic Address, "Acquirement, London."

THE SCHOLASTIC, CLERICAL, & MEDICAL ASSOCIATION, LTD.

MEDICAL DEPARTMENT.

This Association was established in 1880 as a Limited Liability Company under the direction of professional men, its object being the creation of a RESPONSIBLE and THOROUGHLY TRUSTWORTHY Agency. The Medical Department has met with so great success that it has been found necessary for one of the Managing Directors (Mr. G. B. Stocker) to devote his whole attention thereto; and he has the assistance of an experienced Medical Accountant and a large staff of clerks. Further, a Board composed entirely of gentlemen of high standing in the Medical Profession has been appointed, and to them matters of dispute and complaint are referred.

The association undertakes the SALE of PRACTICES and PARTNERSHIPS; the Introduction of LOCUM TENENS and ASSISTANTS MEDICAL ACCOUNTANCY (by a duly qualified Medical Accountant); INVESTIGATION and VALUATION of Practices, &c.; POSTING BOOKS and sending out Bills, &c., &c.

A Pamphlet relating to the Medical Department, with the names of the "Directors" and "The Medical Advising Board," and terms, will be sent on application to—MR. G. B. STOCKER, MANAGING DIRECTOR, 8, LANCASTER PLACE, STRAND, W.C.

Telegraphic Address—"Triform, London." Telephone No. 1854 (Gerrard).

FOR SALE.

(1) HIGH-CLASS PRESCRIBING PRACTICE in a favourite and increasing Health Resort. Average receipts over £450. Well situated house. Premium £735.

(2) YORKS, WEST RIDING.—PRACTICE in a Growing Town. Cash receipts for 12 months ending December, 1899, £680, including clubs worth about £60. One horse. Rent £35. Premium £650.

(3) IMMEDIATE.—EASTERN COUNTIES.—Not in the Fen district. Unopposed Practice. Cash receipts for 1898, £1030, including transferable appointments worth about £400. Detached house with stabling, garden and paddock. Rent £50. First-rate hunting. Premium £1500.

(4) PARTNERSHIP.—SMALL SOUTH COAST TOWN.—Old-established Practice. Cash receipts average £1063, including appointments worth about £150. A one-third Share would be sold for two years' purchase, with option of purchasing up to one-half in three years.

(5) SOUTH COAST.—RESIDENTIAL TOWN.—Old-established Good-class PRACTICE. Cash receipts for £1898 £537. Good and well-situated house; rent £60. Premium £750. The Practice could only be transferred to an experienced purchaser, preferably 35 to 50 years of age.

(6) PARTNERSHIP.—HOME COUNTIES.—Delightful residential country district. Cash receipts between £1200 and £1300 per annum, including appointments worth about £150. First-rate society. Small house. Rent £50. A one-third Share would be sold for 2½ years' purchase. Purchaser, unless a bachelor, should have some private means.

(7) PARTNERSHIP.—Residential Suburb of a large Town in the North of England. Good-class Non-dispensing PRACTICE. Cash receipts for 1899 about £800. Fees mostly 5s. A one-half Share would be sold at two years'purchase. There is scope for increase. Purchaser should have some private means.

(8) PARTNERSHIP.—EASTERN COUNTIES.—Half Share of a country town practice of about £1000 per annum, including club and union appointments. Price two years' purchase.

(9) PARTNERSHIP.—EAST COAST.—LARGE TOWN.—Cash receipts 1898, £1304, including appointments worth £450. A One-third Share would be sold for two years' purchase, with option of further purchase after seven years.

(10) PARTNERSHIP in a leading and rapidly increasing Practice of £3000 per annum in a first-rate residential town (with good hospital). Purchaser must be a bachelor and a graduate of a leading University or F.R.C.S.

(11) PARTNERSHIP in an old-established working-class Practice in a small manufacturing town in the Midlands. Cash receipts average about £1200. A one-third share would be sold at once for one and a half years' purchase.

(12) Near Charing-cross. A well-established PRACTICE. Fees mostly cash. Receipts for 1898 £420, more than half ready money. Visiting fees 2s. 6d. to 7s. 6d. Rent £60. Good introduction. Premium £600.

(13) MIDLANDS.—Old-established Working-class PRACTICE in a small Manufacturing Town. In present Incumbent's hands 20 years. Cash receipts about £1200, including appointments of about £300.

(14) SOUTH MIDLANDS.—Unopposed Country PRACTICE. Cash receipts for 1898, £333, including appointments of over £110. Nearest opponent five miles. Good house with stabling and garden. Rent £35. Excellent hunting. Premium only £400 to an immediate purchaser.

(15) AN advantageous OPENING for a Roman Catholic medical man presents itself in the neighbourhood of London. Capital necessary £900. Small house and working expenses very small.

(16) NORTH OF ENGLAND.—Small manufacturing town. Old-established PRACTICE. Receipts about £600. Good house with stabling and small garden; rent £40. Premium for goodwill £600.

(17) PARTNERSHIP.—LONDON, W.—View to Succession. Middle- and Working-class PRACTICE; has averaged for the last three years between £600 and £700 per annum, including appointments worth between £200 and £300. No carriage. Large house. Rent £70. Premium £750 (£400 to be paid upon signing agreement and balance at end of partnership).

(18) SOUTH MIDLANDS.—A small PRACTICE in an attractive Country District. Receipts for 1899 at the rate of £320 per annum. House only suitable for bachelor. Rent £20. Considerable scope. Premium £480, to include house, furniture, drugs, and surgery fittings.

(19) LARGE NORTHERN CITY.—MIDDLE-CLASS PRACTICE. Cash receipts for last twelve months £509. Visiting fees 2s. to 7s. 6d. Well-situated house; rent £35. Three months' introduction. Premium £600.

FOR SALE (*continued*).

(20) BORDER OF WALES.—UNOPPOSED PRACTICE.—Cash receipts for 12 months ending May, 1899, £349, including appointments of about £60. Small semi-detached house with stabling and garden. Rent £25. Premium £349.

(21) PRIVATE ASYLUM.—Within 100 miles of London. Licensed for both sexes. Average net profits £1173. Capital required of at least £7700. Figures given above have been taken out by the Accountant to the Association.

(22) PRIVATE ASYLUM.—Within an hour by rail of London. Licensed for the reception of a small number of ladies of the upper class. Net profits over £1100. Capital required of at least £4800.

(23) LANCASHIRE.—Middle- and Working-class PRACTICE in a manufacturing Town. Cash receipts average £1590 per annum. No appointments. Very good house, with stabling. Premium one year's purchase.

(24) SOUTH-WEST.—Small Seaside Town.—Cash receipts average £650 in addition to income from resident patients at present about £1000. Exceptionally good house overlooking the sea, which must be purchased. Price £4000 (£2000 could remain on mortgage). Premium for goodwill £800.

(25) LARGE MIDLAND TOWN.—Middle- and working-class PRACTICE, established over twenty years. Income £450. Midwifery £1 1s. and £2 2s. No appointments. Rent £30. Premium £450.

(26) UNITED STATES.—Increasing PRACTICE in a residential seaside town in an Eastern State. Cash receipts for 1898 £1100. Visiting fees 6s. Rent about £50. Excellent society. An English or Scotchman would succeed well. The receipts for 1899 will be much more.

(27) WEST OF ENGLAND.—PRACTICE (chiefly working-class) in a pleasant country district. Receipts £500, including appointments of £150. Rent of house £28. Premium £420.

(28) LONDON, E.—Middle- and Working-class PRACTICE. Cash receipts for twelve months ending September 16th, 1893, were £360, including clubs worth about £40. Double-fronted house; rent £50. Premium £300.

(29) SOUTH COAST.—LARGE TOWN.—Cash receipts for 1898 £500 including a considerable amount from clubs. Surgery fees from 1s. No midwifery under £1 1s. Rent £45. Premium only £300.

(30) LONDON, S.E.—Increasing Cash PRACTICE of £658 (receipts for 1898). Rent £33, and other expenses small. Price only £450.

(31) SOUTH-WEST OF ENGLAND.—Seaport town. Receipts about £350. No Midwifery. Well-situated house; rent £40. Premium £400.

WANTED TO PURCHASE.

(32) WANTED TO PURCHASE, a PRACTICE in the Home Counties or South of England, of not less than £1500 per annum. A large house essential. Purchaser is experienced, has considerable private means, and can invest up to £5000.

(33) WANTED, a good middle-class PRACTICE of £1000 per annum in a suburb of a large Town (Lancashire preferred). Purchaser is M.R.C.S., L.R.C.P., experienced, and can invest the necessary capital.

(34) WANTED, a good-class PRACTICE in a Residential Suburb of Manchester (Eccles preferred) of £1000 per annum upwards. Purchaser is M.D., M.R.C.S., &c., and can invest £3000.

QUALIFIED ASSISTANTS WANTED.

(40) Durham, £120, in.- (41) Kent, £160, out.- (42) Norfolk, £140, rooms. (43) Glam, £150, in view to partnership. (44) Essex, £100, in.- (45) London, N.W., £100, in-. (46) Hants, £100, in-. (47) London, W., £100, in-. (48) Mon., £120, in-. (49) Middlesex, £104, in-. (50) Lancs., £150, rooms. (51) N. Devon, £150, rooms. (52) Scotland, £140, out-. (53) Yorks, £120, in-. (54) Lancs., £100, in-. (55) Norfolk, £100, in-. (56) Dorset, £120, in-. (57) London, E., £100, in-. (58) Cheshire, £100, in-, cycle. (59) Cheshire, £120, in-. (60) Yorks, £150, and rooms. (61) Kent, £120, in-. (62) Notts, £120, in-. (63) Yorks., £100, in-; (64) Staffs, £140, and house. (65) Derbyshire, £150 and rooms. (66) Hants, £120, in-, or £170, out-; cycle. (67) Middlesex, £120, in-. (68) Lincs, £150, out-. (69) Glam., £140, rooms. (70) Devon, £150, out-; view to partnership. (71) London, N., £120, rooms. (72) Kent, £100, in-. (73) Devon, £100, in-. (74) Devon, £150, out-. (75) Somerset, £150, and house. (76) Herts, £100, in-; view to partnership. (77) Yorks, £100, in-, ride. (78) R.M.O. Institution, Suffolk. £100, in-. (79) North Wales, £140, in-, view to partnership. (80) Yorks., £100, in-. (81) Staffs., £120, in-.

N.B.—There are several hundred purchasers on the books of the Association so that the sale of any good Practice or Partnership with a reasonable time is virtually certain.

LOCUM TENENS SUPPLIED.

ADAMS & PARKES (B.A. Cantab.),

UNIVERSITIES AND GENERAL MEDICAL BUREAU,

8, JOHN STREET, ADELPHI, STRAND, W.C.

This Agency is conducted by CAMBRIDGE GRADUATES. Highest references and testimonials. PARTNERSHIPS and Transfer of PRACTICES speedily arranged. LOCUM TENENS or ASSISTANTS; a large number of reliable, well-qualified men always available.

Open to all Medical Men. No CHARGE to PURCHASERS or for ENQUIRIES.

Every application receives the immediate personal attention of the principals.

All communications treated as confidential.

List of terms (which are moderate) and references gratis on application.

Telegraphic Address: "Interjoin, London."

SELECTED FROM OUR REGISTER.

No.	Locality.	Class.	Income.	Premium.
1.	YORKSHIRE... ...	MIDDLE-CLASS	284 ...	300
2.	LONDON, N.	WORKING-CLASS ...	330 ...	300
3.	ESSEX	MIDDLE-CLASS ...	260 ...	245
4.	SUSSEX COAST ...	MIXED	650 ...	725
5.	WESTMORELAND ...	MIDDLE-CLASS	274 ...	260
6.	STAFFS.	GENERAL	300 ...	250
7.	LONDON, S.E. ...	CASH...	620 ...	400
8.	NOTTS	MIDDLE-CLASS	330 ...	210
9.	MANCHESTER ...	DENTAL PTNERSHIP...	800 ...	600
10.	ESSEX	WORKING-CLASS ...	550 ...	400
11.	SOMERSET	MIXED	400 ...	300
12.	CAPE TOWN ...	DENTAL	1220 ...	750
13.	NORFOLK	SEASIDE PTNERSHIP	300 ...	600
14.	MONMOUTHSH ...	MIDDLE-CLASS	400 ...	350
15.	HANTS	SEASIDE	400 ...	500
16.	WESTMORELAND...	COUNTRY	300 ...	250
17.	MIDLANDS	GOOD NUCLEUS ...	270 ...	Offer
18.	LONDON, S.W. ...	MIXED	1120 ...	1 year
19.	LONDON, N.W. ...	PARTNERSHIP	600 ...	450

(See also this week's "British Medical Journal" List.)

Also a large number of Nuclei.

Several good ASSISTANTSHIPS (in- and out-door) to be filled immediately.

Full particulars on application.

THE MEDICAL AGENCY,

1, Southwark Street, London Bridge, S.E.

Managing Director—Mr. CHAS. H. WELLS.

Office Hours—10 A.M. to 5 P.M.; Saturdays, 10 A.M. to 1 P.M.

Telegrams: "Tubercle, London."

THE ABOVE AGENCY UNDERTAKES:—

TRANSFER of PRACTICES, and INTRODUCTION of PARTNERS, INVESTIGATIONS, VALUATIONS, ARBITRATIONS, NEGOTIATIONS, SUPPLY of EXPERIENCED ASSISTANTS and LOCUM TENENS, MEDICAL ACCOUNTANCY, including Examination, Posting and Auditing of Books.

Terms and further Particulars forwarded on application to the Managing Director, at the above address.

FOR DISPOSAL.

1. EAST MIDLANDS.—Desirable general Country PRACTICE, with valuable appointment. Income £1500. Hunting district. Premium £ 000.

2. DEATH VACANCY.—Firmly established increasing PRACTICE, N.E. District. Income £670, with appointment of £50. Rent £55. House built for medical man. A reasonable offer for goodwill, furniture, drugs, and fixtures accepted.

3. LONDON, S.W.—Good middle-class NUCLEUS, favourably situated. Fees 3s. 6d. upwards; Midwifery 2 and 3 guineas. Income £120. Rent £75 inclusive. Premium £120.

4. SURREY.—Favourite residential district. NUCLEUS in unopposed part.

5. YORKS.—Old-established Middle-class PRACTICE. Town 30,000 inhabitants. Income averages £720. Vendor retiring. Practice easily worked. Good house; rent £41 [illegible]. Low premium—one year's purchase.

6. LONDON, S.E.—Very old-established PRACTICE in nice Suburb. Income averages £610. Excellent well-situated house. Educational facilities. Rent low. Premium £1000.

7. LONDON.—Increasing PRACTICE. Superior artisan and middle-class. Transferable appointments of £220. Income £620. Good fees. Horse not necessary. Premium £900.

8. WITHIN 100 MILES.—MIXED PRACTICE. Town 250,000 inhabitants. Income about £700. Great scope. Rent £28. Premium £600. Vendor offers Partnership if preferred.

9. SOMERSET.—Purely Country PRACTICE; very attractive district. Present income £375. Capable of increase. Excellent house, stabling, and grounds. Rent only £30. Premium £375. Books have been examined by the Agency.

10. LANCS.—Old-established PRACTICE. Manufacturing urban district, with surrounding agricultural villages. Income £400. Rent of roomy convenient house £22. Premium £400.

11. CUMBERLAND.—Unopposed PRACTICE. Scope for increase Nice district. Good fees. Rent £30. Income £260. Premium £250.

PRACTICES WANTED AND FOR SALE

LONDON.—Rapidly growing healthy suburb. Receipts £400. Middle-class residential, with branch surgery. Premium 300 guineas.

Usual List next week or post free.

Numerous English PRACTICES wanted for our Purchasers.

Northern Medical Association, Ltd., Glasgow

Messrs. H. Wilson & Son,

26, CHARLES STREET, ST. JAMES'S SQUARE, S.W.

Established over half a century.

MEDICAL VACANCIES.

Ironworks, £140 in-door; with private rooms; good opportunity for Surgery. S.W. District, £100, in-door.

Several Locum Tenens required directly.

(Established 1875.)

Mr. PERCIVAL TURNER

Son of a well-known Practitioner, and Author of Guide to Medical and Dental Professions),

Telegraphic Address— "EPSOMIAN, LONDON." 4, Adam-street, Adelphi, London, W.C. (close to THE LANCET Office).

Hours for Consultation 10 to 5. Saturdays 10 to 1.

To Vendors.—Wanted, Practices and

PARTNERSHIPS in all parts of England. Mr. Percival Turner has at present several hundred clients waiting to purchase Practices, and Vendors having such for sale, ranging from £300 upwards, can be almost sure of finding immediate purchasers at full value by communicating in confidence with Mr. Percival Turner.

London Suburbs.—Partner wanted

to replace one retiring from good General Practice in a favourite good-class residential suburb. Fees 3s. 6d. to 10s. 6d. No appointments. Income £900 a year and increasing. Every investigation. A Half Share for Disposal for two years' purchase.—Apply to Mr. Percival Turner, 4, Adam-street, Adelphi, W.C., who has personally investigated Practice.

*** USUAL LIST NEXT WEEK.

MEDICAL ACCOUNTANCY.

In connexion with the S. C. and Medical Association, Limited.

INVESTIGATION OF PRACTICES.
ARBITRATIONS.
DEBTS COLLECTED.
BOOKS POSTED AND AUDITED.
PARTNERSHIP ACCOUNTS ADJUSTED.

Mr. MORRIS, F.S.A.A., 8, Lancaster-place, W.C.

To Purchasers of Practices.—Before

concluding arrangements the books should be examined and the numerous necessary inquiries as to bonâ-fides made by a Medical Accountant specially versed in such matters. With twenty years experience and special facilities for making such inquiries Mr. Percival Turner will be happy to act for purchasers at short notice. Terms and full particulars on application.—4, Adam-street, Strand, London, W.C.

MEDICAL TRANSFER AND PARTNERSHIP.

56, Ludgate-hill.

Messrs. Orridge & Co., Medical

Transfer Agents, Referees, and Valuers, in offering their services to the Profession, have pleasure in referring to the fact that for ABOUT HALF A CENTURY the name of Mr. ORRIDGE has been known in the advertising columns of the leading medical journals, and that a very large proportion of the Medical Men throughout the kingdom have confided their interest in the adjustment of PARTNERSHIPS and TRANSFERS to their care.

Purchasers who will communicate (confidentially) the NATURE and EXTENT of their wishes regarding investment can be apprised of appropriate opportunities as they occur.

On occasion where ADVICE is required in forming a correct conclusion as to the worth or eligibility of a Practice, Messrs. ORRIDGE & Co trust that their familiarity with the various contingencies that govern value will be found of considerable service to those by whom they are employed. N.B.—No charge is made to purchasers.

BIRMINGHAM MEDICAL AGENCY,

6, FREDERICK RD., FIVE WAYS, BIRMINGHAM.

(Late 164, Corporation Street.)

MESSRS. LEE & MARTIN

NEGOTIATE TRANSFERS OF PRACTICES AND PARTNERSHIPS WITH PROMPTITUDE AND CARE.

A LARGE NUMBER OF PURCHASERS ALWAYS ON THE BOOKS.

LOCUM TENENS AND ASSISTANTS

SUPPLIED AT SHORT NOTICE.

Additional qualified ASSISTANTS are now required.

Telegram "Locum Birmingham."] [Telephone 1230

MEDICAL TRANSFER AGENCY (ESTAB. 1860).

168, EUSTON-ROAD, N.W.

Mr. Herbert Needes (son of the late Mrs. Needes, and for more than ten years associated with her in the management of this old Agency) is still carrying on the Business, and will be glad to negotiate the Transfer of PRACTICES and PARTNERSHIPS on the usual terms. No connexion with any other office.

LOCUM TENENS.—Reliable Gentlemen always on the Books.
ASSISTANTS provided free of charge to Principals.

1. URGENT.—MUST BE DISPOSED of, owing to health, a small Country PRACTICE, situate in a pleasant Midland County. Income about £350, including £115 from appointments; but there is scope for any active man. Nearest opposition five miles. Suitable house, stabling, and paddock; rent £35. Price £400. Station within a mile.
2. MANCHESTER.—Required a High-class PRACTICE within easy distance of this city by an experienced married gentleman of large private means. Income up to £1000. No inferior class connection entertained. Apply to Mr. Herbert Needes.

*** THE USUAL LIST OF PRACTICES AND PARTNERSHIPS WILL APPEAR NEXT WEEK.

Advertiser wishes to hear of sound PRACTICE for Disposal in neighbourhood of Manchester or Liverpool. No clubs, &c.—Particulars in confidence to No. 1098, THE LANCET Office, 423, Strand W.C.

Practice or Partnership, good- or middle-class, wanted by experienced Graduate, married, age thirty, with means. Good appearance. Accustomed to good society. Particulars in confidence.—Address, No. 1101, THE LANCET Office, 423, Strand, W.C.

Partnership.—Good residential suburb of London, a Half-Share to be sold.—Particulars write Jno. A. Saunders, 141, Lalcham-road, Catford, S.E.

B.A., M.D., &c., Dublin University, L.M., Gynæcology Certificate, and Post Graduate Resident, Rotunda, Dublin, also Post Graduate Bacteriology Course, at present District Surgeon in a large district in an Eastern British Protectorate three years), owing to small amount of private practice, absence of promotion possibilities, small salary and increments, is desirous of joining a Gentleman in a high-class Practice with scope for increase. Surgery, Gynæcology, Midwifery, Bacteriology, and Hospital work preferred. Colonies not objected to.—Address, No. 1048, THE LANCET Office, 423, Strand, W.C

£250 cash from prompt Purchaser, will secure Lease, Furniture, and Goodwill of excellent Nucleus. Recently established. Already doing well. Appointment estimated worth £90 per annum, transferable. Seaside town, South. Small convenient house, three bedrooms, bath-room. Rent on lease, £35.—Address, No. 1105, THE LANCET Office, 423, Strand, W.C.

Desirable Nucleus, London, N.W., suitable for a young energetic man. Nominal premium (£50). Vendor called out.—Adams and Parkes (B.A. Cantab.), 8, John-street, Adelphi, Strand, W.C. Telegraphic address: "Interjoin, London."

£50 immediate nett cash will pur- chase good-class Cash PRACTICE in Lancashire. First-class position, leading thoroughfare, good house.—Address, No. 1099, THE LANCET Office, 423, Strand, W.C.

For Sale, an old-established Practice in S.W. district of about £400 a year, easily worked. Ample scope of increase by an energetic man. Club appointments certain of transfer. Good corner house, main road, long lease. Short introduction. Price £350, including drugs, gas fittings, surgery fittings, and furniture, &c.—Address, No. 1107, THE LANCET Office, 423, Strand, W.C.

Evening Work, in or out, wanted by qualified Man attending London Hospital. Well experienced, reliable, &c.—Address, No. 1095, THE LANCET Office, 423, Strand, W.C.

Assistants and Medical Men failing to obtain what they require should apply to ADAMS & PARKES (B.A. Cantab.), 8, John-street, Adelphi, Strand, W.C. Telegraphic address, "Interjoin, London." No charge made for unsuccessful services.

Salary £160 per annum.—Out-door qualified ASSISTANT wanted, to Visit, attend Midwifery, and occasionally assist in Dispensing and Bookkeeping. Dispenser and bookkeeper kept. Practice entirely private. Rooms, coals, gas, and attendance found.—Address, Medicus, care of Messrs. Woolley, Wholesale Chemists, Victoria Bridge, Manchester.

Locum Tenens supplied. Apply to G. B. Stocker, Esq., Secretary, Medical Ac. Assn., Ld., 8, Lancaster-place, Strand, W.C. The rule of the Association is that no Assistant or Locum Tenens shall be recommended till direct inquiries have been made as to his antecedents. Names of the Committee of Management and Medical Advising Board and descriptive pamphlet on application.—Telegraphic Address, "Triform, London." Telephone 1854 Gerrard.

In-door Assistant wanted at once.— Dispensing; little or no night work. Time for reading or attending hospital. Highest references required.—Apply, M. P. H., 100, Stoke Newington-road, N.

Qualified Assistant, must have good reference. Salary £3 a week, with extra commission, coal, gas, and attendance.—Apply, between 7 and 9.30, at 329, Goswell-road, near the Angel.

Assistancy or Management of Branch required by Married Man, aged thirty-eight years. Good references.—Address, No. 1103, THE LANCET Office, 423, Strand, W.C.

Assistantship (out-door) or Manage- ment of Branch wanted. Age 34. Six years' experience of general practice. Well received by patients and experienced in Midwifery. Disengaged.—Address, No. 1100, THE LANCET Office, 423, Strand, W.C.

Wanted immediately, in-door quali- fied ASSISTANT. Welsh preferred. Good salary to suitable man. Dispenser kept.—Apply, stating age, experience, &c., R. T. Williams, Surgeon, Cwmavon, Port Talbot, Glamorgan.

Wanted immediately, a qualified capable ASSISTANT, in-door. Abstainer preferred. Salary £130.—Address, No. 1097, THE LANCET Office, 423, Strand, W.C.

Wanted, Assistantship. Thoroughly experienced. Well received by patients. Aged thirty-six. Good salary expected.—Dr. Williams, Royal Infirmary, Edinburgh.

Wanted immediately, fully qualified ASSISTANT; unmarried preferred; out-door. Good salary to competent man. Must be strictly sober and reliable.—Apply, with references and stating age, to Osmund H. Chapman, 19, Ainslie-street, Grimsby.

Wanted in London, at once, a qualified Gentleman as in-door ASSISTANT. The appointment holds out a good prospect to a suitable applicant.—Reply with full particulars, including age and recent references, to No. 1110, THE LANCET Office, 423, Strand, W.C.

Wanted, in 3 weeks, a qualified out-door ASSISTANT in a small Colliery Practice. Salary £150 per annum, with rooms and attendance.—Address, No. 1113, THE LANCET Office, 423, Strand, W.C.

Wanted, in a colliery district in South Wales, a qualified ASSISTANT. Knowledge of Welsh an advantage. Salary £200, with rooms and attendance. May also lead to Partnership if satisfaction be given.—Address, No. 1112, THE LANCET Office, 423, Strand, W.C.

Wanted, an out-door qualified ASSISTANT to Visit, Dispense, and attend Midwifery. Usual bond. Able to ride and drive. Rooms and attendance found. Apply, stating salary required and references, to Medicus, care of Mr. W. Potter, Stationer, High-street, Wrexham.

Wanted, a qualified Gentleman three or four Evenings in the week. Work light. S.E. district. Near three hospitals. State age.—Address, No. 1108, THE LANCET Office, 423, Strand, W.C.

Wanted immediately, a qualified Man to Visit, Dispense, and attend Midwifery. Mining district. Salary £150 a year. To sign usual bond.—Address, No. 1096, THE LANCET Office, 423, Strand, W.C.

Wanted, immediately, a thoroughly competent indoor ASSISTANT, DISPENSER, and BOOKKEEPER (single man); must be trustworthy and energetic. Good references required.—Apply by letter to Messrs. Dodsworth and Fountain, Chiswick, W.

Wanted, for Partnership Practice, a thoroughly reliable DISPENSER with good (recent) testimonials.—Address, No. 1104, THE LANCET Office, 423, Strand, W.C.

Qualified Lady Dispenser wishes for an Engagement either with a Medical Man or in a Hospital. Good references.—Address, R. P., 54, Jeffrey's-road, Clapham, S.W.

Wanted, a Dispenser for Evening work. Work light. S.E. district. Near three hospitals.—Address, No. 1109, THE LANCET Office, 423, Strand, W.C.

Surgical Old Indiarubber of every description purchased for cash.—JAMES WARD & Co., India-rubber Cement Manufacturers, 5, Pleasant-grove, York-road, London, N.

42s. per Doz. less 5 per cent. for Cash.

HYGIENIC LIQUEUR FOR LADIES.

Possessing Great Body and Aroma.

"SLOE GIN."

42s. per Doz. Less 5 % for Cash.

See "THE LANCET" REPORTS, "MEDICAL MAGAZINE," DR. LASCELLES-SCOTT, GRANVILLE H. SHARPE.

PURE RICH RUBY COLOUR.

OUR OWN MAKE. ABSOLUTELY PURE.

Made from The Choicest Selected Ripe Fruit.

Carriage Paid on 1 Doz. and Upwards.

"BLACKBERRY GIN."

"May enter into competition with many of the better known liqueurs of its class."—PRACTITIONER.

PERFECT BEVERAGES WITH AERATED WATERS.

Indispensable for Hunting, Shooting, Fishing, and Golf Flasks.

CHARLES WRIGHT AND SON, Limited, WIRKSWORTH and LONDON.

Established 1795. For Wholesale Prices and Agencies apply to WIRKSWORTH. Bonded Stores, LEITH.

Established 1839.

THE

PERFECTION OF SCOTCH WHISKEY.

For a long series of years we have devoted much attention to the selection of the finest of Scotch Whiskies and to their thorough maturing, as these, when skilfully blended, produce a **Liqueur** which is at once

PURE, DELICATE, and HEALTHFUL.

In the knowledge of its perfect purity, we with unfaltering confidence recommend it to all who are in search of a pleasing and wholesome stimulant.

THE LANCET, after analysing our whiskey, said:—

"It is excellent in every respect, smooth in taste and delicate in flavour."

Price FORTY-ONE SHILLINGS per DOZEN,

Inclusive of Bottles and Case, and Carriage paid to any Railway Station in England in quantities of Two Dozen.

A SAMPLE WILL BE SENT PER POST ON RECEIPT OF SIX STAMPS.

DOUGLAS & MASON,

DISTILLERS & WINE MERCHANTS, EDINBURGH.

BULLOCK'S PEPSINA PORCI.

DOSE—2 to 4 GRAINS.

ACID GLYCERINE OF PEPSINE

DOSE—1 to 2 DRMS. (BULLOCK).

In this preparation advantage has been taken of the solubility of Pepsine in Glycerine to produce a convenient and desirable *liquid form* of this valuable medicine; whilst the preservative qualities of the menstruum confer upon the Acid Glycerine of Pepsine the property of keeping for any length of time.

May be prescribed with most substances compatible with Acids.

In 4-oz., 8-oz., and 16-oz. Bottles, and in Bulk.

The published experiments of G. F. DOWDESWELL, Esq., M.A. Cantab., F.C.S., F.L.S., &c., Dr. PAVY, Professor TUSON, the late Professor GARROD, Dr. ARNOLD LEES, and others, conclusively demonstrate the excellence, high digestive power, and medicinal value of the above preparations.

J. L. BULLOCK & CO., 3, Hanover St., Hanover Sq., London, W.

PRINTED and PUBLISHED by the REGISTERED PROPRIETORS, at No. 423, Strand, and Nos. 1 and 2, Bedford-street, adjoining, in the Parish of St. Martin-in-the-Fields, Westminster, in the County of London, and sold by all Booksellers and Newsvenders in Great Britain and Ireland and the Colonies.—Saturday, Dec. 30th, 1899.

MEMBERS of the PROFESSION are CORDIALLY INVITED to WRITE for SAMPLES.

Fry's
PURE CONCENTRATED
Cocoa.

The Medical Press, including "The Lancet," "Brit. Med. Jour.," and the "Medical Annual," testifies to its ABSOLUTE PURITY.

THE "STRONGEST & BEST" COCOA.

FRY'S MALTED COCOA.

"Excellent. Its dietetic and digestive qualities are beyond dispute."—THE LANCET.

250 GOLD MEDALS, &c.

Paget's Milk Food.

"The question of ARTIFICIAL FEEDING, then, is practically reduced to some modification of cow's milk."—Dr. ROTCH (*Infant Feeding, Keating's Diseases of Children, p. 274.*)

SEND FOR SAMPLE, PAMPHLET, AND PRICES.

PAGET'S MILK FOOD is prepared by Modifying Cow's Milk with Cream and Milk Sugar to the Standard of Breast Milk, and requires only the addition of Hot Water to make a Perfect Milk Food. THE BEST FOR INFANTS.

Supplied in Vacuum Bottles in boxes of 6 and 12 Bottles.

FOR INFANT FEEDING. STERILIZED.

CLAY, PAGET & CO. LTD. Offices: 20, Bentinck Street, Cavendish Square, London, W.

THE PERFECT AUTOMATIC HOT APPLIANCE.

Combines luxury and comfort with a feeling of security, especially at night. It automatically supplies heat wherever wanted, as long as wanted, can be started in a few minutes, weighs only a few ounces, and is enthusiastically welcomed by the Medical Profession and Nurses. Most remarkable results have followed its use in Chills, Bronchitis, Cramp, Cholera, Pneumonia, Pleurisy, Pleurodynia, Congestion of any Organ, Neuralgia, Gout, Rheumatism, Sciatica, Lumbago, Abscess, Carbuncle, Ear, Throat, and Eye Affections. Wet flannel between heating pads and flesh acts as poultice or fomentation without disturbing patient. The Safety Lamp can be attached by rings to table or any object near, and prevents possibility of overturning.

Special Attachments can be had for Throat, Ear, and Eye, Gout Shoes, Knee Caps, and Skull Caps, &c., &c.

"We have tested its action and found it quite satisfactory."
—THE LANCET, Dec. 17th, 1898.

"This method of applying heat seems capable of being developed with great benefit to those suffering from different forms of Chronic Rheumatism and cases in which poulticing or fomentation may be indicated."
—BRITISH MEDICAL JOURNAL, Jan. 28th, 1899.

The Admiralty, after making very careful and searching trials at Plymouth and Gosport Naval Hospitals, have given an order for the Appliance.

Price ONE GUINEA, in case complete.

TO BE HAD OF ALL WHOLESALE AND RETAIL CHEMISTS.

GLUTEN FLOUR.

Telegraphic Address: "GLUTENS, LONDON." ESTABLISHED 1859.

Containing 7% Starch and no Sugar. Manufactured by G. VAN ABBOTT & SONS, Original Manufacturers of all Gluten & Soya Foods for Diabetes, BADEN PLACE, CROSBY ROW, BOROUGH, S.E.

DIABETES

BLATCHLEY'S Celebrated Breads and Biscuits supplied to nearly all the London and County Hospitals & Infirmaries. Blatchley's Gluten and Bran Biscuits, a speciality in treatment of Obesity, made from a receipt of Dr. Yorke-Davies. Price Lists free.
E. BLATCHLEY, 167, Oxford St., London.

OBESITY

Adopted at many of the principal METROPOLITAN and other HOSPITALS

and at the Government Baths of the GRAND DUCHY OF BADEN.

THE TALLERMAN TREATMENT.

BY THE LOCAL APPLICATION OF

SUPERHEATED DRY AIR,

For the treatment of RHEUMATOID ARTHRITIS, RHEUMATISM, GOUT, STIFF AND PAINFUL JOINTS, FLAT FOOT, LUMBAGO, SCIATICA, ECZEMA, NEURITIS, SPRAIN, ANÆMIA, CHRONIC ULCER, & KINDRED DISEASES.

THE TALLERMAN TREATMENT.

The Tallerman Treatment was invented in 1893 and in 1894 it was recognised as a new and successful method of treating certain diseases in which drugs, mineral waters, and other remedies utterly failed. Its subsequent adoption at many of the principal hospitals in the metropolis and elsewhere, together with the papers published by eminent medical authorities (British and foreign) giving the results of their clinical and scientific investigation (see "The Tallerman Treatment," by A. Shadwell, M.A., M.B. Oxon., M.R.C.P. Lond., Baillière, Tindall, and Cox) established beyond dispute

1. The great value of the Tallerman Treatment in the above mentioned diseases.
2. The absolute safety with which it may be used in the feeblest of cases.
3. That where the treatment is sufficient the benefit is permanent.
4. That although the treatment is local the curative process is general—i.e., if the treatment be applied to one limb only the whole body, head, and the furthest extremities** will participate in the benefit.

THE TALLERMAN APPARATUS

For carrying out the above treatment are constructed of such material and workmanship as to be practically indestructible and accidents to patients impossible.

1. Any heating agent can be used, Electricity, Gas, or Oil (an advantage secured by special patent).
2. The apparatus is portable and it can therefore be sent anywhere and used with whatever heating agent is available.
3. Its own fittings enable it to be connected with gaseliers in two minutes.
4. The Tallerman system of heating by electricity is quite opposed to that known as "Light Rays," "Radiant Rays," and the temperature is raised gradually as when heating by gas, this enables the patient to arrest it at any moment and at the approach of any discomfort. The temperature therefore surrounding the limb under treatment cannot be suddenly or instantly raised beyond human endurance by accident or otherwise.

NOTE.—(*a*) The large metropolitan hospitals where gas-heated apparatus have been used for some six years declined to change that method for electric heating, though the necessary fittings were placed at their disposal. (*b*) All the cases reported upon by Hospitals, Eminent Medical Authorities, and Congresses were cases treated in the gas-heated apparatus.

The profession and the public can therefore estimate the value of statements circulated by individuals who are interested in apparatus with which **electricity only** can be used, to the effect that fumes dangerous to patients arise from the use of gas.

TREATMENT OF PATIENTS.

Patients are treated at the Company's Institute, Welbeck-street, where there is accommodation for a limited number of Resident Patients which is reserved for Ladies. Treatment is not commenced in any case without medical introduction or approval.

PATIENTS TREATED AT THEIR OWN HOMES.

The Tallerman Apparatus is let to patients on medical introduction, the advantages of which to both patient and doctor scarcely need to be indicated.

1. Fatiguing and painful journeys and the exchange of home comforts and attention for the inconveniences of crowded hydros, and apartments can be of little advantage to a sufferer.
2. Patients treated at their own homes under the supervision of their own medical men obtain relief and benefit quicker and at less expense than by visiting public baths at health resorts.
3. That such mineral water treatment as is obtainable at the undermentioned places is quite an unnecessary adjunct to the Tallerman Treatment has been practically demonstrated by the extraordinary success obtained even in the out-patient cases at the large London hospitals.

IMITATIONS OF THE TALLERMAN TREATMENT

AT CORPORATION BATHS AND PUBLIC BATHS AT HEALTH RESORTS.

The Tallerman Apparatus for carrying out the Tallerman Superheated Dry-Air Treatment have not been supplied to any of the Public or Corporation Baths or Hydros **at Harrogate Bath, Buxton, Strathpeffer, Leamington, Droitwich, or other similar resorts.** And therefore any so-called Superheated Dry-Air Treatment at those places are mere cheap imitations or variations of the Tallerman Treatment carried out by other apparatus, respecting the safety and efficiency of which there does not appear to be a single published hospital report.

Professor JAMES STEWART, at the Annual Meeting of the British Medical Association, September 1st, 1897.

"In my opinion the most valuable of all methods of treatment is the use of baths of superheated dry air after the Tallerman method. It has been used in twenty cases of rheumatoid arthritis in the Royal Victoria Hospital during the past nine months with gratifying results."—BRITISH MEDICAL JOURNAL, Oct. 30th, 1897.

LAENNEC HOSPITAL, PARIS, Report and Cases.

"The Tallerman Treatment, on the one hand, has taken effect on diseases reputed to be incurable, such as chronic deformatory rheumatism, against which the physician until now confessed himself to be completely powerless, and on the other, it has acted more quickly and with better results than all other therapeutic methods in diseases often intractable, such as sciatica, gout, and gonorrhœal rheumatism."—LA PRESSE MEDICALE, Jan. 20th, 1896.

**** Demonstration before a medical meeting specially convened by Dr. FORTESCUE FOX at Pump room, Strathpeffer:**

"A lady suffering from very acute rheumatic arthritis in the hands," right arm treated with benefit. "A peculiarity was that she was enabled to close her left hand, which had remained outside the bath during the operation, a movement she was unable to execute before."—Dr. Fortescue Fox's report to the INVERNESS COURIER, July 26th, 1895.

NORTH-WEST LONDON HOSPITAL, Report and Cases.

"Tallerman's Treatment in Arthritis Deformans.—I must add I have never seen results so immediate and satisfactorily produced by any other treatment. It is now two years since this treatment was commenced in the first case, and yet the patient continues free from the complaint, and even the deformity to the fingers has greatly disappeared."—THE LANCET, 29th August, 1896.

Dr. MARTIN MENDELSSOHN (Demonstration by), at the Medical Society of Berlin.

"Mr. Tallerman of London has conceived the idea of employing superheated dry air locally applied. You see before you the apparatus which serves this purpose. A harmful reaction on the heart is avoided, so that the treatment is applicable even where cardiac weakness is present. Frequently, after a single good long sitting, the joints are found to be relaxed and the movement freer, and in many instances the effect is perfectly astonishing—fixtures of the joints of long standing being so far improved as to restore the use of the limbs."—DEUTSCHE MEDICINISCHE WOCHENSCHRIFT, 17th March, 1898.

G. B. LEESE, Secretary, P. & M.D. CO., Ltd.

THE TALLERMAN TREATMENT INSTITUTE,

50, Welbeck Street, Cavendish Square.